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CULTIVATOR,

A CONSOLIDATION OF

BUEL'S CULTIVATOR & THE GENESEE FARMER,

DESIGNED TO

IMPROVE THE SOIL AND THE MIND,

AND TO

ELEVATE THE CHARACTER AND STANDING OF THE CULTIVATORS OF THE AMERICAN SOIL.

WILLIS GAYLORD and LUTHER TUCKER, Editors.

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THE CULTIVATOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

EMBELLISHMENTS OF THE CULTIVATOR.

WITH the first number of our new volume, we present our readers with a portrait of Mr. Prentice's splendid short-horn Bull "Fairfax," which attracted so much attention at the late Fairs of the New-York State Agricultural Society and the American Institute. The portrait was drawn by Van Zandt, and engraved by Orr, expressly for the Cultivator, and does great credit to both artists; and is, we think, the best specimen of this kind of engraving which has yet appeared in this country.

"Fairfax" is a pure white, and was two years old on the 10th of May last. At the late Fair of the N. Y. State Ag. Society, he received the first premium as the best two year old bull of any breed; and at the Fair of the American Institute the first premium for bulls, over two years old, was awarded to him. He was bred by E. P. Prentice, Esq. Mount Hope, near Albany; was sired in England by Sir Thos. Fairfax; d. Splendor, by Symmetry, 2723; g. d. by Young Bedford, 1701; g. g. d. by Isaac, 1129; g. g. g. d. by Whiteworth, 1584; g. g. g. g. d. by White Comet, [sire of 1000*l.*]1582; g. g. g. g. g. d. by a son of Charge's Kit, 2179.

The Sir Thomas Fairfax was bred by Jonas Whitaker, Esq., at Burley, near Otley, Yorkshire, England, and after having successfully contended for numerous sweepstakes and local premiums, without once having been beaten, took the first prize at the late meeting of the Royal Agricultural Society in Bristol. He was got by Norfolk, 2377; dam, Miss Fairfax, [page 509, 3d volume Herd Book,] by Fairfax, 1023; g. d. Lilly, by Young Warlaby, 2812; g. g. d. by Young Dimple, 971; g. g. g. d. by Snowball; g. g. g. g. d. Layton, a son of Mr. Charge's Gray Bull, 872.

Norfolk, 2377, was also bred by Mr. Whitaker, and got by Mr. Bates' Second Hubback, 1423; d. Nonpareil, by Magnet, 2240; g. d. by Mr. R. Collins' North Star, 459, &c. &c.

Miss Fairfax took the first premium at the great Show in Leeds, in 1839.

At the sale of Mr. Smith's stock, in September last, at West Rasen in England, Lord Adolphus Fairfax[2 yr. old] by the Sir Thos. Fairfax, brought 255 Guineas, [near $1,200] more than three times as much as the best by any other sire, and the cow Nectarine by Norfolk, the sire of Sir Thomas brought 150 guineas, while the average was less than £33.

In addition to this beautiful portrait, the present number contains the following engravings, making it altogether the richest in Illustrations of any that we have yet issued:

Fig. 2.—A Farm House, by T. M. Niven, Esq.
Fig. 3.—Principal Floor of do.
Fig. 4.—Chamber Floor of do.
Fig. 5, 6, 7.—Sections of do.
Fig. 8.—A Straw Bee Hive.
Fig. 9.—Hussey's Corn and Cob Crusher.
Fig. 10.—An Ornamental Gate.
Fig. 11.—A Hand Plow.
Fig. 12.—Mott's Garden Vase.
Fig. 13.—Thom's Sun Dial.

In the contributions of our correspondents, this number is also peculiarly rich, embracing, besides the interesting article from our Scotch correspondent, communications from Virginia, Vermont, Indiana, Ohio, Mississippi, Maryland, North Carolina, Massachusetts, Illinois, Wiskonsan, Upper Canada, and from the counties of Albany, Greene, Monroe, New-York, Onondaga, Orange, Richmond, Saratoga, Schenectady, and Wayne, in this state.

Having done what lies in our power, to render the Cultivator worthy of the patronage of our countrymen, it remains for us only to ask our readers to reciprocate the favor by doing what they can to promote its circulation. Our friends should remember that we begin the year with a new subscription list, and its length will depend mainly on their efforts to procure new subscribers. The "hard times" will prevent multitudes from renewing their subscriptions unless urged thereto by some one who feels an interest in the subject. How many of our readers will devote a little time to this matter? For any efforts they may be pleased to make, they will have our hearty thanks.

MR. COLMAN'S PROPOSED AG. TOUR.

BELOW we give, with great pleasure, a place to a prospectus of an Agricultural Tour and Survey, which Mr. COLMAN, so favorably known to the Agricultural public, proposes to make in England, and Continental Europe. The Fourth Report of his Agricultural Survey of Massachusetts, proves that the task he proposes to himself, is one admirably adapted to his talent of observation, and habit of recording valuable Agricultural facts. Derived as most of our agricultural methods and implements, are from abroad; imported as our domestic animals were from the same region in the outset, and where we must still look for important improvements in the various breeds, a close survey of the whole ground can scarcely fail to be attended with the most beneficial results. An acquaintance with the methods of English Husbandry will be of use to us, as furnishing hints to improvement, even when the processes themselves are impracticable, or too expensive for adoption here. We may state that the proposal has been received with signal favor, nearly 1500 names having already been obtained as subscribers. This number ought at least to be doubled, and we doubt not it will be, previous to the first of April next, at which time Mr. Colman proposes to sail for England. A subscription is opened at the office of the Cultivator, in which we shall be happy to enter the names of any of our friends.

EUROPEAN AGRICULTURAL TOUR & SURVEY.

Several gentlemen, interested in the advancement of Agricultural science and improvement and of Rurul education, have proposed to Mr. Henry Colman, late Commissioner of Agricultural Survey of Massachusetts, to visit Europe for these objects. The plan is for him to spend a year in England in the examination of the Husbandry and Rural Economy of that country, and a year on the Continent in the examination of French, Flemish, Swiss and German Husbandry, and especially the Agricultural or Manual labor Schools and the Experimental Farms.

It is thought that such an examination, as yet never undertaken by an American, might, if well conducted, essentially conduce to the advancement of agricultural knowledge and improvement in this country; and especially serve the cause of rural and practical education, which is now exciting great interest throughout the United States. The general plan of the Survey will conform to Mr. Colman's Survey of the Agriculture of Massachusetts.

It is proposed to publish his reports in successive numbers. The first number is expected to appear by the first of January, 1844, and sooner if practicable. The rest of the numbers will follow in convenient succession at intervals of two or three months.

The whole work will be comprised in eight, or at most ten, numbers of at least 100 pages each, handsomely printed in octavo form, stitched and covered, and embellished with necessary and useful drawings and engravings, title pages and index.

The cost will be 50 cents each number to subscribers. Gentlemen who subscribe are understood as subscribing for the whole work.

As the enterprise involves of necessity a large expense, it is expected that one dollar per copy will be paid on subscribing; or otherwise one dollar on the delivery of the first number; one on the delivery of the second number; one on the delivery of the fifth number; one on the delivery of the seventh number; and one on the delivery of the ninth number, should the work be extended to ten numbers.

An early notice is respectfully requested of gentlemen who are disposed to encourage this enterprise, addressed to Henry Colman, Rochester, N. Y., or to Little & Brown, Boston, Mass.

It is intended that the numbers shall be delivered in all the large cities, and without expense to subscribers, unless ordered by mail.

Mr. Colman feels greatly indebted for the liberal encouragement which his personal friends and the public spirited friends of Agricultural Improvement, wherever it has been presented to them, have given to his enterprise; and designs to leave early in the spring. After the 1st March next he may be addressed at Boston, Mass.

Rochester, Dec. 22, 1842.

FARMERS' AND GARDENERS' CLUB.

On the 20th ultimo, there was held at the City Hotel, in this city, a meeting of Farmers and Gardeners from the counties of Schenectady, Rensselaer and Albany, for the purpose of forming a Farmers' and Gardeners' Club.

The meeting was more fully attended than was expected, although several from Columbia and Greene were absent, whose presence we confidently relied on.

An association to be called the Farmers' and Gardeners' Club was organized and resolved to meet monthly for the purpose of discussing Agricultural and Horticultural subjects, and for exhibiting the various products of the Farm and Garden.

Its first meeting is to be held on Tuesday, the 17th instant, at the Cultivator office, precisely at 10 o'clock.

The question for discussion, is the best mode of (mechanically) preparing the soil for the reception of seeds roots and plants.

☞ For City Agents see last page.

AMERICAN PORK IN ENGLAND.

THE anticipations of those who expected the new British Tariff would open a trade in American pork and beef with that country, are in a fair way to be realized to a considerable extent. The present extremely low prices of beef and pork in this country will doubtless contribute much to that result. In various parts of the United States extensive establishments have been opened for slaughtering, packing and curing beef and pork according to the English methods, which will doubtless render it more acceptable and saleable than it now is. We are not to be, however, without rivals in that market. A late letter from Buenos Ayres, states that a commercial house in that city had commenced slaughtering and packing 4,000 head of cattle and 20,000 sheep for the British market. It is amusing to witness the expedients resorted to by the agricultural, and to a considerable extent the other presses of the kingdom, to decry the imported articles. The people, the half starved people, however, seem to think that American beef and pork is far better for the purpose of sustaining life than none at all; and the low price at which it can be sold, is still better for them, and readily brings it into use. Sir John Tyrrel, M. P., has has taken upon himself the task of speaking down the sale of American meat; and the free use he made of Mr. Everett's name in support of his positions, has called out the Minister to correct some of the M. P.'s errors. The London Examiner gives a report of Sir J. Tyrrel's speech at an agricultural dinner in the West of England, from which we make the following extracts, as a specimen of the knowledge of American matters displayed by this M. P.:

> "He had all along felt the competition we should be exposed to in pork and beef; but with respect to the imported pork, it was a matter of notoriety that it wasted very much in boiling, even to the extent of one-half. (Hear, hear.) The reason of this great waste had been intimated to him, by those who had recently been in America, and he would state it as a fact, because in distress it was always agreeable to listen to alleviating circumstances. In America the sheep were so worthless, that, except in a very few instances, the skin only was used, while the carcass was thrown away. The reason of that was, as had been stated by the American minister, whose ability and knowledge as an agriculturist he would not dilate upon, that they could not grow turneps or mangel-wurzel, on account of the heat in summer and the cold in winter. The way then in which the pork was fatted was this—the pigs ate the sheep. (Loud laughter.) He did not state this on light authority; in point of fact the pigs in America ate the sheep. (Continued laughter.) If this were the case, the poor man who bought American pork need not at all wonder at its great waste in boiling."

It is unquestionably true, that a few years since, large numbers of sheep were killed, their hides and tallow saved, and the flesh thrown at once to the pigs. We believe this is the extent of the foundation for this charge; and at the present time, mutton fed pork would be a rare article in the States. As to the turneps, beets, &c., we wish the Hon. Mr. Tyrrel could have seen some of the crops grown last summer in the vicinity of this city, as we think, if not as extensive as some British farmers' root crops, they might have served to convince him that turneps can be made to grow in America. A field of turneps, 150 or 200 of which would weigh a ton, are not to be sneezed at any where.

CULTURE OF COTTON.—Dr. Cloud of Alabama, informs us that circumstances have prevented him from furnishing for this number of our paper, the article on the Culture of Cotton, promised in his last communication. He says, however, that we shall have, in season for our next, in detail the modus operandi by which his experiments have been conducted, together with the character and quality of the soil, &c. It will be looked for with much interest.

HANCOCK (GA.) PLANTER'S CLUB.—This Club held a Fair at Sparta, on the 4th of November, which was well attended, and at which a numerous list of premiums were awarded on domestic products and stock. Several of the premiums for stock were awarded to our friends Capt. R. S. Hardwick and Col. John Bonner. The premiums on the best swine were awarded to the latter, on "Rip Van Winkle" and "Nonesuch," two animals sent him by Mr. Bement last autumn.

NEW-YORK STATE AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society, will be held at the Lecture Room of the Young Men's Association, in the Exchange, Albany, on Wednesday, the 18th of Jan. at 9 o'clock, A. M. The Annual Address will be delivered by the President of the Society, JAMES S. WADSWORTH, Esq.

A meeting of the Executive Committee will be held at the office of "The Cultivator," on Wednesday, Jan. 11, at 10 o'clock, A. M. LUTHER TUCKER, *Rec. Sec'y.*

ADDRESS OF THE HON. JAMES M. GARNETT.

Whatever proceeds from the pen of Mr. Garnett, is sure to meet with a cordial welcome from the farmers of our country, and we should owe an apology to our readers for not noticing his able address before the New Castle Agricultural Society, in our last No., were it not for the fact, that that number being the closing one of a volume, it became necessary to occupy a large portion of it with Reports of Societies, and the favors of correspondents, that could not well be delayed.

After a happy introduction, Mr. Garnett proceeds to enumerate and explain some of the causes which have contributed to retard the progress of American Husbandry. The first of these, he traces to the natural fertility of our soils, inducing the general belief that they could never be worn out, and the consequent erroneous practices based on such a belief. These practices resulted in a general impoverishment of the soil, and created an opinion that it was labor lost to attempt a restoration of their fertility. Another obstacle in the way of progress, was to be found in the fact, that "one class of our farmers is characterized by a marvelous fondness for, and tenacity of their own crude, dogmatic opinions, and another by a too ready credence of the opinions of others;" especially of those considered scientific men. The first consider every thing printed on the subject of agriculture, as lies, or idle fancies; and the last are great theorizers, and ready to jump to conclusions before the premises are well established. Experiments, inconclusively conducted, and not carefully repeated, are put down as another cause of error. There is no use in drawing extensive applications from a single trial, and the disposition to do this, greatly lessens the benefit which may be derived from carefully conducted and repeated experiments. Another evil adduced by Mr. Garnett is our notorious fondness for "hobby horses and humbugs." His catalogue of hobby horses is an instructive one, and it might be much enlarged without at all exceeding the limits of truth. A disposition to grow monsters, and award premiums for such, in both animal and vegetable kingdoms, is another of the causes that have retarded our advance in agriculture. The principle here laid down by Mr. Garnett, is so obviously just, that we wish it may be impressed on the mind of every one who shall hereafter be called upon to act as a judge or committee at our Fairs. "It may be laid down as a principle without exception, *that all premiums having a tendency to render tillage and pasturage more showy than useful, more costly than profitable, directly retard instead of advancing the true interests of Agriculture.*" * * * "In other words, to obtain the greatest results at the least cost of time, labor, and money, should be the invariable object of all Agricultural premiums, and of all Agricultural exhibitions." The last obstacle that Mr. G. mentions, is one which results from the times; farmers say, "it is hardly worth while to make crops; we can get nothing for them; neither is it worth while to improve our lands." This feeling, and it is too common, is justly pronounced by Mr. Garnett, "moody madness or sheer folly." "Making haste slowly," is far better than not advancing at all, and in the end we shall assuredly find our reward.

The remedy for these obstacles and these evils, is to be sought in the *proper employment of time.* And we should be happy to lay the whole of Mr. Garnett's remarks on this important subject, before our readers. He justly says, "this is the true, the only catholicon, or universal remedy for all diseases, both intellectual or corporeal. It will so operate upon farmers who depend for their subsistence chiefly on their manuul labor, as to not only make them think that *labor honorable,* but never to intermit it, except for the purposes of necessary rest, food, moderate recreation, and improvement in that knowledge of their duties, and of the true theory of their profession, which can alone perfect their practice." Mr. Garnett in the following extract, deprecates that feeling of jealousy or ill will, which is sometimes found existing among the several classes of our citizens: "Be it ever remembered, that all the honest trades, professions, and callings of our community, are necessary links in the great social chain that binds us together. Therefore let not the members of either, but especially of our own calling, look upon any of the others with a jealous eye; for *their* general prosperity necessarily contributes to *ours,* since *we* produce what *they* must have, to live at all; and the richer *they* become, the more of *our* productions they must and will purchase." There is so much good sense, and important truth, in the following remarks on a topic not as frequently brought to the notice of all, as it should be, that we give them entire: "Farmers' daughters should be taught, among other useful truths, that often to labor with their hands, is to use them as God himself intended they should be used: that their heads may be exceeding empty and useless within, although externally loaded with as many costly ornaments as would buy a good farm; that their true, their most estimable adornments are, the knowledge and love of their duties; their most honorable occupation, to aid their mothers in all household concerns; that the strumming of musical instruments as a principal business; the attaining the art of dancing as the perfection of accomplishments; and the annual consumption of a large portion of their lives in long, stated migrations to places of fashionable resort, like so many birds of passage in search of their natural food, are modes of spending time, which cannot, by any proper use of langauge, be deemed worthy of rational, moral, accountable beings, who have intellects to cultivate, numerous highly important duties to perform, but above all, immortal souls to be saved." Merely adding that these remarks are as applicable to the daughters of every class as to those of farmers, and worthy the attention of all, we take leave of this address; with the feeling that by giving it to the public, he has added much to the obligations under which he has already laid the farmers of this country, by his exertions and labors in their behalf.

MR. RIVES' ADDRESS.

We have had the pleasure of perusing the instructive address delivered before the Agricultural Society of Albemarle, Va. at the annual Fair held on the 29th of Oct. 1842, by the Hon. Wm. C. Rives, President of the Society. The high standing of the speaker was a sufficient guarantee of the ability with which the duty assigned him would be performed, and well has he discharged his obligation in this respect. The Society of Albemarle has had some of the most distinguished men of the nation for its presidents, among them President Madison, and Gov. Barbour, and Mr. Rives has proved himself worthy of treading in the steps of these able men.

Mr. Rives has some excellent remarks on the importance of association for public purposes. He says:

> "This social principle is the modern lever of Archimides in all enterprises of public good, from making a railroad or canal to christianizing a world. There is no country in which it has been so extensively and efficiently employed, for general purposes, as in our own. This characteristic feature of American society was remarked upon, with his accustomed discrimination and judgment, by a learned and distinguished foreigner [De Tocqueville,] who visited us a few years ago, and who, tracing its existence to the popular character of our institutions, affirmed as a general philosophical truth, 'that in *Democratic* countries, the science of association is the mother of sciences; the progress of all the rest depends on the progress it has made.'"

Mr. Rives speaks encouragingly of the progress of agriculture under the auspices of the Albemarle Society, and points out some striking instances of this improved husbandry. His remarks on the general advance of agriculture are just; and those on the connection of science with the employment of the farmer, show an intimate acquaintance with the subject, and are forcibly expressed. The importance of agricultural education is illustrated, and earnestly enforced.

> "We have in great numbers, schools of Law, schools of Medicine, schools of general Literature, but none of Agriculture. Why is this so? The recent census shows that the number of persons engaged in Agriculture, is four times greater than the whole number of persons employed in Commerce, Manufactures, the learned Professions, and trades of every description all put together. Does not every consideration of policy and justice, then, require the provision of some means of professional education, in an art to which so predominant and vital a portion of the industry and worth of the country is devoted?"

Mr. Rives earnestly urges upon Virginia, the necessity of providing for a Professor of Agriculture in her University, and establishing in connection with that institution, *a special Agricultural Institute,* designed for those who do not wish to follow the usual course of University studies, and in which department, theory and practice should go hand in hand. As a model of such an Institution, "a perfect exemplar," Mr. Rives refers to the establishment of Von Fellenburg, at Hofwyl, in Switzerland, of which he says:

> "It was my good fortune during my residence in Europe, to visit this classic spot; and I can safely say, that I saw nothing in the palaces of kings, in the museums of the fine arts, in the gorgeous displays of wealth and power on every hand, which impressed me with half the admiration I felt in contemplating this modest but noble establishment of the Swiss republican, patriot and sage. Agriculture he chose as the basis of his enterprise, and by the happy combination, in the training of his pupils of intellectual and bodily labor, mutually relieving and giving zest to each other, he has achieved those prodigies of moral and physical improvement, which have drawn upon his institution the earnest attention and applause of the civilized world. It has furnished to Continental Europe, the best models of its agriculture, while it has sent forth into its various states and kingdoms, some of their most useful, virtuous, and enlightened citizens. At the same time, the model farm of Hofwyl stands a proud refutation of the stereotyped satires, so frequently indulged on scientific farming, as the accounts of the establishment kept with minute mercantile exactness, disclose through a series of years, a nett profit of 8 1-2 per cent upon the whole capital employed—a rate of profit with which, I venture to say, any of us *practical farmers* would be more than content."

Mr. Rives has used lime to a considerable extent, having abundance burned on his own land. He has applied 12,000 bushels to 150 acres, or about 80 bushels per acre. The result at first did not answer his expectations, finding little effect upon the growing crop from its use. He adds:

> "My first disappointment, however, in regard to the effects upon the growing crop, was more than compensated by the marked, unequivocal, and decided effect I have never failed to perceive from the lime *alone* in the *clover* succeeding the wheat crop, with which it has been my general practice to apply the lime at the time of seeding, harrowing in the lime and the wheat at one and the same operation. The increased luxuriance of the clover has furnished, of course, conclusive evidence of the improvement of the soil from the application of the lime, and has in its turn, enured to the still further amelioration of the soil. All my observations in regard to lime, would lead me to the conclusion that it is the most *permanent* of manures."

Mr. Rives' lime was applied to soil of a brownish gray color, forming a close gravely loam. From a single experiment, he infers that lime is not adapted to the red ferruginous clay soils which abound in the same region. We believe a different opinion prevails with regard to the use of lime on those red clay soils in Maryland, and farther north, it being considered useful on them. Chemical analysis might, however, point out the causes of this discrepancy. It is, says, Mr. Rives, a proverb in England and Scotland, that

"He that marls sand, will soon buy land;
He that marls clay, throws all away."

One of the most interesting parts of Mr. Rives' Address, is that which relates to the colonization of a number of citizens from Dutchess county in this state, in Fairfax county in that state. From inquiries instituted by Mr. Rives, it appears that nearly 60 families have purchased lands to the amount of 13,530 acres, to which they are now fast removing. Should this movement succeed, Virginia may expect a new era in her agriculture, and be spared the mortification of seeing her most effective population annually leaving her domain to seek homes beyond the mountains. We have long been aware of the disposition in many of our thrifty, intelligent northern farmers, many of whom are now in Michigan, Wiskonsan, and Iowa, to remove to Virginia; and nothing has prevented, but the well known existence of a feeling, (owing to peculiar institutions,) that labor is degrading. That feeling removed, the rich vallies of Virginia would find the stream of emigration now flowing beyond the lakes, turned into them, and the result would be a rapid augmentation of her population and her products. Mr. Rives may well congratulate his hearers on the accession of such men to the citizenship of Virginia, and their number will doubtless increase. We cannot avoid considering it a favorable omen for our country, when her ablest statesmen and most unquestioned patriots, find a pleasure and relief in retiring from the cares of legislation or office, to their farms, managed with skill and success by themselves, and bringing the best powers of their minds, to inculcate and enforce the theory and practice of an improved agriculture.

MR. FULLER'S ADDRESS.

We have been kindly furnished with a copy of the Address delivered by William Fuller, Esq. President of the Onondaga Co. Ag. Soc. at the Cattle Show and Fair held by the Society, Oct. 5, 1842. Mr. Fuller is well known as the firm and enlightened friend of agriculture; and his effective services in the legislature of this state, in its promotion, will long be remembered to his credit. The address now before us, furnishes another proof of his devotion to the great cause of an improved husbandry; while to the positions advanced by him, his situation as President of the Society of that influential and flourishing county, gives additional weight. We should be pleased to quote liberally from this address, but a few extracts will be all we shall be able to present. After some well conceived and beautiful allusions to the past, to the influence which agriculture has had on the peace and the civilization of the world, after mentioning the advantages resulting from the union of science with the practice of agriculture, Mr. Fuller preceeds to show its practical results, and the duties it imposes on us. Here he puts the following pertinent queries which we hope every farmer will answer for himself:

> "I bring, however, no complaint, I prefer no charge,—but I ask, have we, in reference to our agricultural interest, always done our whole duty to ourselves, our country and our families? Do we try to elevate and magnify our calling? Do we in all suitable places, and at all suitable times, claim for the cultivator of the soil that high standing to which he is justly entitled? Do we endeavor to impress on the minds of our sons and our daughters, the value and real worth of their profession?—a profession full of happiness, contentment, and healthful enjoyment. On the contrary, do not some of us, the owners of noble farms all paid for, complain of the drudgery of the farm—that we can get no release from its duties to improve ourselves and our children? Do not some of us go further and draw invidious comparisons, injurious to ourselves, contrasting the plain comfortable garb of our son, with the gaudy finery of some city clerk, though that son is admirably filling up his destiny, and fitting himself for future influence and usefulness? Is this proper? Is this commendable? Is the position true? Who among all the different avocations of life, has more time to devote to useful reading, study and reflection, than we ourselves, far removed from the noise, and din, and dissipation of our cities; our sons and daughters can and will, if properly directed, take up the pages of history, of the sciences, and if you please, of politics, and in the quiet of our homes and the peace of our firesides, arrange, digest, and mature those truths and that knowledge, that will fit them for future action."

We cannot doubt that the farmers of Old Onondaga will cheerfully respond to this spirited appeal:

> "Progress is emphatically the spirit of the age, and shall we, here in Onondaga, in a county containing an industrious population of 70,000 independent freemen, with an area of 455,000 acres of land, and almost the whole of it of the first quality for agricultural purposes—within whose borders there is more of the mineral manures than in any of our sister counties, possessing Lime, Marl, Gypsum, and Salt in abundance, and at our doors—shall we be behind the spirit of the age, and not turn to the best account all the advantages of our position? In short, shall we not meet manfully the responsibilities which our position imposes ou us?"

Mr. Fuller strongly urges upon the farmers of Onondaga, the importance of instituting experiments on the value of salt as a manure; and gives from Prof. Johnston's work, a table showing the result of experiments made by Mr. Fleming, near Paisley in Scotland; showing its value when compared with other manures of a mineral nature. The soil was a heavy loam, a crop of potatoes was harvested in 1840, the ground sowed to wheat, and to one-eighth of an acre in each experiment, the mineral manures were applied. The following was the result of the three most efficient manures:

160 lbs. of nitrate of soda per acre, gave 152 lbs. of wheat for 31s. or 12s. 6d. per bushel.

80 lbs. of nitrate and 5 cwt. of rape dust, gave 400 lbs. of wheat for 43s. 6d. or 6s. 9d. per bushel.

160 lbs. of common salt, gave 472 lbs. of wheat for 3s. 6d. or 6d. per bushel.

Thus showing a decided advantage in favor of the salt, in both quantity of grain, and the cost of producing it.

Mr. Fuller ably enforces the necessity of our paying more attention to this kind of manures, by instances of success among ourselves, many of which are recorded in the Cultivator, and to some of which he alludes. On the subject of agricultural education, and particularly the necessity of having the basis of agricultural science and practice taught in our common schools, Mr. Fuller takes true and strong ground. There can be no good reason given why boys and young men, intending to make agriculture a pursuit or profession, should not in the common school, be able to acquire that elementary knowledge at least, so essential to future advance, and final success:

> "What," asks Mr. Fuller, "is the great business for life of a large portion of our population? Agriculture! We teach our children to read and write, together with the elements of arithmetic, geography, and grammar. All this is well, but will such an education meet all the wants of practical life—has the time spent in the acquisition of knowledge been as well spent as it might have been—could not some time have been spared to learn the geology and chemistry of soils, not only how soils are formed, but of what they consist?"

We hope to see this subject attracting more and more attention, for we are confident it is one of vital importance to the progress of improved husbandry. Agricultural education has not received the attention it deserves from individuals, or from the state. We want schools at which both the theory and the practice of agriculture shall be taught to those who most need it, the sons of farmers, or those who intend themselves to become farmers. We want well arranged agricultural school books for the use of common schools, and agricultural works or periodicals, should form a part of every school district library. The want of such instruction in agriculture, is more and more deeply felt by thousands. We have now before us, a letter from a gentleman liberally educated, a skillful practical farmer, and the owner of one of the best farms in the state, making some inquiries as to the analysis of soils, and lamenting that a part at least, of the time spent by him in the study of the languages, had not been devoted to chemistry, as connected with agriculture. This case is not a singular one. There are multitudes who feel the want of a more thorough knowledge of agriculture, and they should let their voices be heard in favor of a radical reform in this matter. Let us hope that the sensible remarks and forcible appeal of Mr. Fuller, in behalf of a more extended agricultural education, will not be unheeded.

AGRICULTURAL EXPORTS OF THE U. STATES.

There is annually published at Washington, a statement of the commerce and navigation of the country, in a volume of some 400 pages. From that embracing the statistics of 1841, the last published, we extract the following summary of the principal exports for the year:

Products of the sea,	$2,846,851
" " forest,	6,264,852
" agriculture,	83,677,947
" manufactures,	13,593,072
Total of Domestic exports,	$106,382,722

The agricultural products are classified as follows:

Products of Animals.		
Beef, tallow, hides, horned cattle,	904,918	
Butter and cheese,	504,818	
Pork, bacon, lard, live hogs,	2,161,527	
Horses and Mules.	293,143	
Sheep,	35,767	
		$4,360,180
Product of Vegetables.		
Wheat,	822,881	
Flour,	7,759,646	
Indian corn,	312,954	
" meal,	682,457	
Rye meal,	138,505	
Rye, oats, and small grain,	159,893	
Biscuit, or ship bread,	378,041	
Potatoes,	64,402	
Apples,	48,396	
Rice,	2,010,107	
		$12,377,282
Tobacco,		12,506,703
Cotton,		54,330,341
Flaxseed, hops, brown sugar,		103,441
Total of agriculture,		$83,677,947

Such tables are valuable, as showing the relative products that go to make up our exports, and consequently of paying other countries for the articles we purchase from them. They also exhibit the proportion each of the great interests of the country contribute to the sum total of products, and as a fair matter of inference, the protection and care to which they are severally entitled to receive from the hands of Government.

PRICES OF WHEAT.

The following table of the comparative prices of wheat in America and Europe, taken mostly in December, of 1840, will we think be of interest to many of our readers. It is calculated per bushel of 60 lbs., and will show that there are some places nearer England than we are, where wheat is as low as here, and from whence as a matter of course, Great Britain could draw supplies, were her markets for wheat open, before they could be forwarded from this country.

New-York,	$1,04 to	1,08	Archangel,	$ 96 to	1,02
Philadelphia,	96	1,05	Rostock,	1,02	1,08
Baltimore,	96	1,02	Hamburg,	1,02	1,12
Montreal,	1,03	1,07	Koningsberg,	1,02	1,23
London,	1,80	2,00	Kiel,	96	1,05
Paris,	1,23	1,38	Leghorn,	81	1,26
Bordeaux,	1,35	1,49	Genoa,	1,08	1,33
Marseilles,	93	1,40	Ancona,	93	96
Nantes,	1,26	1,38	Stettin,	96	1,05
Dantzic,	99	1,23	Naples,	96	1,03
Riga,	1,38	1,49	Trieste,	1,02	1,17
Petersburg,	1,29	1,38	Santander,	1,32	1,38
Tagaurog,	84	87	Odessa,	90	98

Notices of New Publications.

LIEBIG'S ANIMAL CHEMISTRY.

We intimated in a late number, our intention of giving an extended notice of this new work of Liebig, but have hitherto found no space; and the extensive circulation it has received from the press of the New World, added to that of several American editions in the book form, has rendered such notice now a work of supererogation. Very few writers have had the satisfaction of finding their works so extensively read as Prof. Liebig; and we may add few works have so well deserved to be read as his. Liebig has made no reply to the criticisms which have appeared on his first volume, Chemistry applied to Agriculture, although some of them were sufficiently caustic. He has done better, and in the time which more irritable men would have spent in controversy, he has produced a second volume, giving still more profound proofs of his chemical skill, and of the success with which he is interrogating nature. It is a volume which will be read, and re-read; one which compels men to think, to study, to reflect. Abridgment of it we have found impossible; for the whole may be said to be a series of propositions, not independent, but so woven together and dependent on each other, that separation is difficult. Men who think the world is moving too fast, the *vis inertiæ* class, who dread to have old opinions disturbed, or cherished notions shaken, will decry, not confute, Prof. Liebig; while those who see in each successive conquest of science, a vantage ground for still greater achievements, will look with interest for the Professor's third and concluding volume of this series. The practical inferences which may be drawn from his beautiful demonstrations of the use of carbon in the animal system, may be seen in the following extract from that part of the work which describes the effects of the food of the carnivora and gramnivora in nutrition. It furnishes more matter for thought than volumes of ordinary declamation.

"Man when confined to animal food, requires for his support and nourishment, extensive sources of food, even more widely extended than the lion and the tiger, because, when he has the opportunity, he kills without eating.

"A nation of hunters on a limited space, is utterly incapable of increasing its numbers beyond a certain point, which is soon attained. The carbon necessary for respiration, must be obtained from the animals, of which only a limited number can live on the space supposed. These animals collect from plants, the constituents of their organs, and of their blood, and yield them, in turn, to the savages who live by the chase alone. They, again, receive this food unaccompanied by those compounds, destitute of nitrogen, [starch, sugar, &c.] which during the life of the animals served to support the respiratory process. In such men, confined to an animal diet, it is the carbon of the flesh and of the blood, which must take the place of starch and sugar.

"But 15 lbs. of flesh, contain not more carbon than 4 lbs. of starch, and while the savage with one animal and an equal weight of starch, could maintain life and health for a certain number of days, he would be compelled, if confined to flesh, in order to procure the carbon necessary for respiration, during the same time, to consume five such animals.

"It is easy to see, from these considerations, how close the connexion is between agriculture and the multiplication of the human species. The cultivation of our crops, has ultimately no other object than the production of a maximum of those substances which are adapted for assimilation and respiration, in the smallest possible space. Grain, and other nutritious vegetables, yield us, not only in starch, sugar, and gum, the carbon which protects our organs from the action of oxygen, and produces in the organism, the heat which is essential to life, but is also in the form of vegetable fibrine, albumen, and caseine, our blood, from which the other parts of our body are developed.

"Man when confined to animal food, respires, like the carnivora, at the expense of the matters produced by the metamorphosis of organized tissues; and, just as the lion, tiger, hyena, in the cages of the menagerie, are compelled to accelerate the waste of the organized tissues by incessant motion, in order to furnish the matter necessary for respiration; so the savage, for the very same object, is forced to make the most laborious exertions, and go through a vast amount of muscular exercise. He is compelled to consume force, merely in order to supply matter for respiration.

"Cultivation is the economy of force. Science teaches us the simplest means of obtaining the greatest effect with the smallest expenditure of power, and with given means to produce a maximum of force. The unprofitable exertion of power, the waste of force in agriculture, in other branches of industry, in science, or in social economy, is characteristic of the savage state, or of the want of cultivation."

DANA'S MUCK MANUAL—Second Edition.

Right glad are we to find that Dr. Dana's Muck Manual has so soon reached a second edition, an early copy of which has been forwarded us. Considerable additions, among which are a full index, add much to the value of the work. We have but little to add to the extended review which we gave of the first edition in our last volume. We can recommend it to our farmers as one of the very best theoretical and practical works on manures, and their action, that has yet been published. The present edition is well bound in cloth, and will be sold at the reduced price of 62½ cents. The farmer who does not avail himself of the stores of information contained in this volume, neglects one of the best aids to his progress.

NATURAL HISTORY OF NEW-YORK. *Parts* II *and* III.

The second and third parts of this splendid state work have been laid on our table, but at so late an hour that we have barely time to announce their publication to our readers. Part I contained the introduction, and Dr. DeKay's Report on the Mammalia of the state. Part II is Dr. Beck's Report on the Mineralogy of the state; Part III is Prof. Vanuxem's Geological Report of the Third District. Dr. Beck's report is a volume of some 550 pages quarto. It is divided into 2 parts, the first, Economical Mineralogy, and the second, Descriptive Mineralogy. It contains a most instructive survey of the various minerals found in the state, salt, plaster, lime, iron, lead, &c., &c. It is accompanied by plates illustrative of the various forms of crystallization. We shall doubtless have occasion to refer to this work more at length hereafter.

The report of Prof. Vanuxem forms a volume of more than 300 pages, and embraces the survey of the counties of Montgomery, Fulton, Otsego, Herkimer, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Cortland, Chenango, Broome, Tioga, and the eastern half of Tompkins.

It will be seen from the list of counties enumerated, that the third district embraces a very important section of the state, one containing the great deposites of salt and gypsum, as well as the various kinds of lime-stone found within its limits. From the known talent of the surveyor, we had been led to expect much from his labors, and the rapid glance we have been able to cast over its pages, has convinced us the public will not be disappointed. Embracing as it does, the whole series of New-York rocks, from the primitive, to the verge of the Pennsylvania coal series, it comprehends a great variety of formations, distinctly marked both in their external, and fossilleferous characters. Introductory to each of the groups into which the whole series is divided, are well executed engravings of such fossils as are characteristic of that group, to the general accuracy of which we can bear willing testimony. The great regularity of the New-York series of rocks, and their extension to the west, renders their proper classification and understanding, of much consequence to the American Geologist. We shall endeavor to give a more extended notice of this report hereafter. In the mean time we can only say that this state work, in its progress, more fully developes the necessity and utility of the undertaking, and the ability of the individuals to whose hands its execution was entrusted.

SPARKS' LIFE OF WASHINGTON.

We have received from the publishers, Tappan and Dennett, of Boston, a copy of Sparks' Life of Washington, abridged: 2 volumes 12 mo. This is an abridgment of the Life prepared by Mr. Sparks, as introductory to the "Writings of Washington," in 12 volumes. A work from the pen of Mr. Sparks stands in no need of eulogy from us; but when that pen has been employed in illustrating the history of the Father of his country, we feel a pleasure in calling the attention of our readers to the fact.

Where is the American that has not read a Life of Washington?—and where is there one who would not gladly set down to the perusal of another? Long years ago we read the magniloquent volume of "Parson Weems;" then the standard and voluminous work of Chief Justice Marshall; then the Writings of Washington, and always found much to admire and approve that we had before overlooked. There is something in the character of Washington unlike that of ordinary men; in him we cannot trace those workings of selfishness or ambition, which so much mar the history, and disfigure the character of many of the most prominent men of the age. Sage, Patriot, Saviour of his Country, these are his acknowledged titles. He has a hold on the affections of his country which no other man can have; which no other one will probably ever deserve. As a Farmer, Washington was immeasurably in advance of the times. His letters show a clear-sightedness on this subject, as strongly marked as those relating to War or Government. The publishers deserve the thanks of the public for bringing out this work in so good a style, and every family in the country should possess a copy.

From the same publishers we have also received a work entitled "Universalism Examined, Renounced, Exposed, in a Series of Lectures; by Matthew Hale Smith." It is doubtless well worth examination; but notices of such polemical treatises do not fall within the limits of our periodical.

Hops—Great Yield.—We believe the past season has been a favorable one for hops, but the low prices experienced for several years past, has discouraged the cultivators, and many growers have abandoned the business. Mr. Gurdon Avery, of Waterville, Oneida co., according to a statement by him in the papers of that county, has raised this year, on 12 acres of land, 29,937 lbs. He challenges the world, on both quantity and quality, for $1,000 dollars, on the same quantity of land; or quality without quantity, or quantity without quality, for $500. Mr. Avery is doubtless safe; for his crop is unequaled by any one on record. In England, the average is 7 cwt. per acre; and the very highest rated at 20 cwt. per acre; while Mr. Avery's is about 25 cwt.

Foreign Correspondence.

MR. COKE OF HOLKHAM, Earl of Leicester.

Roxburghshire, Scotland, Nov. 25, 1842.

Messrs. Editors,—Under the above title,you have inserted in the Cultivator for Oct. 1842, some extracts from biographical notices of the late Earl of Leicester, published in England. Your own comment upon the life and character of that great and good man, is admirable and very just. But the biographical sketches from which you have made extracts, are inaccurate in some respects. I will take the liberty of pointing out those errors. And believing, that any authentic information on the improvements in agriculture effected under the patronage, precept, and example of Mr. Coke of Holkham, will be acceptable to your readers, I will add a few reminiscences of that eminent man; and this, I have the satisfaction of saying, I am enabled to do from personal knowledge.

In your extracts, the Earl of Leicester is stated to have been 91 at the time of his decease. He was in fact 88: having been born on the 6th of May, 1754, and died on the 30th June, 1842. The mistake is not important, but in biography, as in most other matters, it is as well to be correct in dates. Your extract then states, "Born to the possession of a princely estate, when he came to take charge of it, he found a *large portion of it* leased to a *Mr. Butt,*" &c., &c. What follows in regard to the rent on the first lease being at 1s. 6d. the acre, and on the second lease at 3s. the acre, is so far correct. But the tenant's name was *Brett,* not Butt as stated, and the *larger portion of the estate,* was only about 500 acres, situated near to Holkham mansion. It now forms a part of the domain in hand, and is enclosed within the park wall. At the expiration of Mr. Brett's second lease, Mr. Coke offered him a renewal for 21 years, at the rent of 5s. the acre, tithes included. Mr. Brett, unfortunately for himself and family, as it afterwards proved, did not accept the offer. Mr. Coke then took the farm into his own hands, and hence, fortunately for the community at large, he became a practical farmer. He was much attached to the pursuit, and zealous in the improvement of agriculture; he gradually increased his farm, and before his death, he occupied upwards of 3000 acres of arable and pasture land, all of which he had brought into a high state of cultivation. The extract further states, "West Norfolk at that time was a rye-growing district. His Lordship made it a wheat-growing one," &c. To this I add: Before Mr. Coke's time, Norfolk was a wheat importing county. It is now one of the greatest wheat exporting counties in England. The distance from Holkham to Lynn, in West Norfolk, is 27 miles. When Mr. Coke commenced farming, that was entirely a rye district. It was believed the soil was too light to bear wheat; but now, there is not an acre of rye to be seen in the whole line, and nothing but wheat in the regular course of rotation of crops. The port of Lynn was formerly a great mart for the export of rye: it is now so for wheat and barley.

The surface soil of West Norfolk is generally a light sand, or sandy gravel, too inferior to be styled loam. It is incumbent upon a chalky subsoil, which is locally termed Chalk, Marl, Clay, according to the texture. Mr. Coke commenced the improvement of his farm by thoroughly clearing it of running rooted weeds in the first instance. He then coated the surface with the subsoil, and applied copious dressings of broken rape cake, in addition to the yard-dung made upon the farm. The turnep crops, which had previously been scanty, were then, not only increased in quantity, but also improved in quality. These were eaten by sheep folded upon the turnep. The soil was farther enriched by droppings from the sheep, and consolidated by their treading, and thus rendered capable of bearing any sort of crops cultivated in England. He then established a regular system of rotation of cropping and manuring, upon what is called the alternate system of white and green, never having two cereal or white straw crops in succession. Very light land was allowed to lay two or more years in grass, and when broken up, only one white straw crop before fallow and manuring for turneps. The top-dressing of subsoil was repeated, at from 20 to 30 years intervals. Peas were sown occasionally, and great crops produced. Peas will not bear frequent repetition on the same land. Peas thrive upon land having a large proportion of calcareous matter: consequently, they were generally sown at Holkham in the rotation after top-dressing with sub-soil.

At the time Mr. Coke commenced farming, all sorts of crops were sown broadcast, and the land choked with annual as well as perennial weeds. He extirpated the perennial by clean fallowing, but the seeds of annuals were not entirely destroyed by that process. He then introduced the drill or row culture, and horse-hoes, and by these means he entirely eradicated the weeds, roots and seeds. Before Mr. Coke's time, turneps, now the very essence of Norfolk husbandry, were very imperfectly cultivated in the county. He introduced the drill culture of that inestimable root, upon the most improved principle. He also introduced the culture of mangel-wurzel, or field beet, for the purpose of feeding cattle, and was particularly successful in the practice. Mr. Coke's system of feeding stock in the stalls and fold yards, was as follows: He began with common turneps, then Swede rutabaga, followed by mangel-wurzel, and topped up with oil cake; thus giving more nutritious food as the cattle advanced in fatness.

Mr. Coke patronized all improvements in agriculture, agricultural implements, and application of manures, and he liberally rewarded the inventors or discoverers. His practice was, to experiment with any new discoveries, or improvements, upon his farm in hand, in the first instance, and if found to answer, he then recommended the practice to his tenantry and the public generally.

Mr. Coke was a very superior judge of stock. He imbibed a taste for it in early life, from an acquaintance he then formed with the celebrated Bakewell. He at that time resided with his father, Mr. Wenman Coke upon the Longford estate in Derbyshire, old Lady Leicester being then alive and residing at Holkham. Bakewell's farm at Dishly in Leicestershire was at no great distance from Longford, and Mr. Coke had frequent interviews with that eminent stock breeder.

On the decease of Lady Leicester, Mr. Wenman Coke succeeded to the Holkham estates. He survived only one year after that accession. And Thomas William Coke, the subject of this memoir, became possessed of the whole of the family estates in Norfolk and in other counties of England, altogether, as your extract styles it, "a princely estate."

I have said, "Mr. Coke was a very superior judge of stock." When he became a practical farmer at Holkham, as before stated, he made trial of various breeds of neat cattle and sheep, but ultimately fixed upon *North* Devon cattle and South Down sheep, on finding from experience those breeds most suitable for the climate and light soil of West Norfolk. He never approved of crossing animals of distinctly different characters or breeds. His working horses were stout, active, well shaped animals, suitable for the light soils and short distance to markets. The horses were mostly employed in carting to market and upon the farm. A great part of the plowing was done by oxen of the *North* Devon breed; from 40 to 50 of those cattle were usually worked upon the farm; a pair in a plow yoked abreast, and tackled the same as horses with collars and traces. Their pace was quite equal to horses plowing in the same field, and that even in hot weather, which is a peculiarity in *North* Devons above all other breeds, owing to their high blood, and in that respect, like race horses. There are three distinct breeds of cattle in Devonshire. The *North* Devons are the highest blood, and the best for general purposes. I could furnish much more information on the Holkham husbandry, but I fear I have already exceeded reasonable bounds; I cannot, however, properly close without explaining the means by which Mr. Coke, much to his honor, and greatly to the public benefit, so widely diffused his knowledge in agriculture, derived from his extensive and successful practice in that first of arts.

Mr. Coke was a most liberal landlord, and he was fortunate in having a most respectable body of tenantry settled upon his estate; men of intelligence, and possessed of capital adequate to fully stocking their farms and carrying on improvements. He granted them 21 years leases at moderate rents. He never advertised his farms for letting at the expiration of the leases. On fixing new rents for renewal he gave the preference to the old tenants, their sons, or near relatives, and they very generally accepted without the least demur. He built them excellent dwelling houses, and complete farm premises for the accommodation of their stock.—He assisted them in the expense of beneficial improvements on their farms.

He frequently visited his tenants in the vicinity of Holkham, and those upon distant parts of the Norfolk estate, at least once in the year. On these occasions, he inspected the stock, crops, cultivation of the farm, and state of the buildings upon it; the farmer being present and hearing his remarks. Then alighting at the farm house and partaking of the hospitality, interesting himself in the comforts of the wife and children, and rejoicing to hear of the family's prosperity. He freely communicated to his tenants information upon his recent experiments, whether the results were successful or otherwise, and gave them advice upon their own practices. He frequently invited parties of his tenants and other eminent agriculturists in the neighborhood, twenty or more at a time, to visit him at Holkham, ride over his farm, and then dine with him at his hospitable mansion. In those parties there was a free discussion upon agricultural subjects, and much valuable information was elicited and diffused. Mr. Coke's tenantry closely followed his example of cultivation, cropping, manuring of land, and selection and management of stock. Their neighbors copied from them, and the Holkham system spread rapidly in Norfolk and the adjoining counties. Agriculturists from distant parts, had free access to, and a kind reception at Holkham at all times; and at Mr. Coke's far famed annual sheep-shearing festivals, he received numerous visitors from all parts of the three Kingdoms, and many from foreign countries, and frequently gentlemen from the United States. These festivals lasted three consecutive days; the programme of which, as follows: The company assembled upon the lawn in front of the mansion at ten in the morning. Mr. Coke then mounted his horse, and accompanied by a large train of visitors. rode over his farm or the adjoining farms of his tenants, Mr. Coke ably lecturing upon agricultural subjects, and experiments in progress, as they went along; also, inspecting the plowing matches for premiums. The sheep-shearers at work, various agricultural implements at work, exhibiting for premiums; and at different farm establishments upon Mr. Coke's occupation, the horses, neat cattle, sheep, and pigs brought forward in competition for premiums, were viewed and judges appointed to decide upon their respective merits. The company adjourned to the mansion at three o'clock, and were admitted, by ticket, previously distributed by Mr. Coke, to a sumptuous dinner provided for them. The company were numerous, generally from 400 to 500; in one instance above 800, and all seated at the same time, without confusion, orders having been previously transmitted to the mansion, to make preparation, according as Mr. Coke distributed his tickets in course of the day's ride. In those numerous and happy assemblages, there was no classification of rank or station—all being embarked in the same pursuit. A plain farmer might be seen seated next to a peer of the realm, perhaps a Royal Duke, or an American Ambassador, and treated with similar respect. Mr. Coke presided over one table, and some eminent patron of agriculture, such as the late Duke of Bedford, the Earl of Albemarle, &c. over the others. After the cloths were withdrawn, Mr. Coke's first toast was "the Sovereign," then followed, "live and let live;" after which he lectured upon agriculture, including the pursuits of the day. Other gentlemen spoke upon similar subjects, and the company generally broke up about nine o'clolck. A similar routine followed on the second and third days; but on the third he distributed his premiums, to the amount of about £300; sometimes considerably more, to the successful competitors. He then drank a bumper to the health of the company, thanking them for their attendance, expressing a hope he should see them all at the following year's meeting, and that they would bring their friends along with them.

So finished the Holkham sheep-shearing festivals, and I will conclude my memoir of the greatest, most munificent, and most successful patron of agriculture the world ever saw, in your graphic words, Messrs. Editors. "Such men as the Earl of Leicester are benefactors of mankind, and when the Marlboroughs and Wellingtons, of his own country, are weighed against him, they will be found wanting."

I again subscribe myself, your correspondent,

Tweedside.

YATES COUNTY AG. FAIR AND CATTLE SHOW.

The second annual meeting of this Fair was held at Penn-Yan, on the 20th of October, 1842, and was in every way worthy and creditable to the agriculturists of that county. It was a gathering of her true nobility;—her hard-fisted, intelligent farmers and mechanics, and indicated that the farmers of Yates are beginning to feel and appreciate the nature and importance of agricultural improvement. The improvement in stock since last year, was visible to all. The large number of fine blooded animals—cattle, colts, pigs, &c., showed what was going on among the farmers, and was full of promise for the future. Long tables appropriated to their use in the Court House, were covered with vegetables, fruits, flowers, specimens of domestic manufacture, the products of the dairy and the loom, and all those articles of taste and fancy which none but woman could devise, and none but her industry execute. The address was by Francis Adams, Esq., President of the Society, and is spoken of as an admirable one, "full of just sentences, of deep and well digested thought, and sound and wholesome advice." The reports, and the awards of premiums, were listened to with much interest, and the whole proceedings passed off in the most cheering and gratifying manner.

MONROE COUNTY AGRICULTURAL SOCIETY.

We have delayed our notice of this flourishing society in the hope of receiving a more full and detailed account than we have yet seen, but find ourselves obliged to be content with such particulars as can be gathered from the papers of Rochester. The Fair was held on the 25th and 26th of October, and was well attended by the substantial farmers of that fine agricultural county, their wives and daughters. The citizens of Rochester in which the show was held, manifested no little interest in the proceedings, and the mechanic's department was particularly well sustained. The exhibition of products of the garden and orchard, was somewhat limited, but the quality was excellent. The sugar beets, turneps, cabbages, celery, carrots, salsafy, mangold wurtzel, &c., &c., would have satisfied an epicure.

The plowing match excited unusual interest. It was held about two miles from the city, and was witnessed by a large concourse of farmers and others. 17 horse-teams without drivers entered the lists; time allowed 60 minutes for horses; depth of furrow 5 inches, width of furrow 10 inches; land measured one-quarter of an acre. "Racing was wholly proscribed." The work throughout was well done, although the ground by many was considered unfavorable for smooth work.

Of animals, Mr. Colman says—"there were several highly improved animals and some excellent native stock among the neat cattle. The magnificent Stud Horse of Mr. Weddle, a horse of most remarkable size and power, and designed for labor, attracted universal admiration. A team of four yoke of oxen from Mr. Ayrault, and some other cattle from Perrinton, and other places, of native stock, and of a cross of the Durham with the Devon, would have done honor to any show in the country. The Leicestershire swine were there likewise in their glory, fairly distancing the Berkshire; and a family of pigs, five months old, which, within our knowledge, could hardly be surpassed for size, thrift, and beauty."

An address was delivered before the society by Mr. Colman; and the premiums announced, with the exception of those on crops (which were reserved for the winter meeting,) on the afternoon of the second day. The address, with reports of committees, &c., have, we understand been published for the use of the society. The course of the Monroe Society is destined to be onward, or we have greatly mistaken the spirit, intelligence, and liberality of the farmers of that county.

WASHINGTON CO. AGRICULTURAL SOCIETY.

The Second Fair and Cattle Show of this Society, was held at Salem, Oct. 11, and came off in the most spirited and happy manner. The day was unusually fine, one of those calm, beautiful days, the glory of the American autumn; and the numbers collected to witness the proceedings, surprised even the most sanguine. It was indeed a general turn out of the entire mass, farmers and others; and we are happy to state, that to the presence of the matrons of the county, and their fair daughters, much of the interest of the day was owing. This is right; enlist the services and the presence of the ladies, and our agricultural societies will flourish. And why should they not be present as well as their husbands or brothers? To what hands can the arrangements of articles of taste, of domestic manufactures, of flowers, &c. be so appropriately confided as to the hands that produced or cultivated them. The address was delivered by the Hon. John Savage, and is spoken of as "an instructive, unostentatious discourse, well adapted to the occasion, and abounding in logical deductions from incontrovertible facts."

The show of Horses, Cattle, Sheep and Swine, was unexpectedly good, although it was well known that few counties contained more choice animals than Washington. Mr. Long, of Cambridge, received the first premium for horses; John Savage, of Salem, for the best bull; Harry Holmes, of Greenwich, for the best cow; James Lake, Whitecreek, for the best Buck; and John J. Steel, Salem, for the best Boar. There were a great number of competitors for the premiums, and the several committees in many cases found no little difficulty in making their decisions.

The show of Agricultural implements was not great, and it was a subject of regret that so few of the mechanics of the County availed themselves of this best of opportunities to advertise their various products and articles. The chairman of the committtee, J. Williams, Esq. of Salem, had agreed to furnish a Dynamometer for use upon this day, but on examining various instruments, he found them so uncertain in their results as to be of little value, and he accordingly at his own expense, constructed a new instrument, upon a plan in many respects original. This was exhibited at the Fair, and in the opinion of good judges, promises to accomplish all that can be desired of such an implement. Mr. Williams certainly deserves the premium he received, as well as the thanks of his fellow farmers, and we should be highly gratified to receive from him a description and drawing of the instrument, to be engraved for the Cultivator.

The specimens of Domestic Manufactures were very numerous, and spoke well for the industry of the fair hands by which the greater part of them were prepared and presented. The samples of carpeting, linens, ladies' hats, sewing silk, cocoons, laces, lace veils, woolen shawls, &c. &c. attracted, and deservedly, much notice. The crops offered for premiums, proved, that however they may have failed in other places, in Washington they have been most abundant. We have arranged some of these in the table below:

		Bush. per acre.
Wheat,	1st Premium,	29, winter wheat,
	2d "	22, 28 qts., spring wheat.
	3d "	25, 7 " " "
Corn,	1st "	80½, 8 rowed yellow.
	2d "	67½,
	3d "	85, China tree corn.
Rye,	1st "	25, 11 quarts.
Oats,	1st "	53½, average on 8 acres.
	2d "	97, 4 quarts.
	3d "	80, 6 "
Potatoes,	1st "	510¾, Merino, seed cut. 20 bushels planted.

We find also the following account of an experiment made by Mr. Holmes, in sowing corn broadcast:—"On the 5th of May, I sowed broadcast and harrowed in, 12 quarts of corn on half an acre and eleven rods of ground without manuring, and it was not touched again until the 22d of Sept., when I cut it up, and set it up on the ground, in the same way that I did the corn which I planted in hills; and on the 5th of Oct. I husked from it 46 bushels of ears, (i. e. nearly 91 per acre.) I have got a much larger amount of fodder than from any piece of the size which I have planted, and I have no hesitation in saying that the stalks will more than pay all the labor of raising it." Farmers will doubtless another year, many of them at least, try the experiment of sowing corn broadcast, as a resource for winter fodder, as in every instance where it was tried the last, either for soiling or for winter use, it was eminently successful.

TOMPKINS COUNTY CATTLE SHOW AND FAIR.

We were kindly furnished, by one of our friends in Tompkins county, with papers containing an interesting account of the Show and Fair of that county last October; but it has unfortunately disappeared from our desk, and we are obliged to substitute a brief notice furnished in a note from another friend in that county. We the more regret this, as the society of Tompkins county is one of the most active and efficient in the state, and its reports in the various departments of the Fair, are such as might serve as models for many others. Our friend says—"The Show and Fair this year was, in almost every respect, a decided improvement on the one of last year. The attendance of farmers and others was greater; the best spirit every where prevailed; a generous feeling of emulation and devotion to the good cause seemed to actuate all; the show of stock, cattle, horses, sheep, and swine, was excellent. There were many beautiful cattle present, and Tompkins has for years been celebrated for some of the best flocks of fine-wooled sheep in the state. These were well represented, as were also the various sorts of pigs at present most prized by breeders. The show of domestic manufactures was, as it always has been in this county, good, and speaks well for the taste, skill, and industry of the ladies of Tompkins. In the department of vegetables, fruit, &c., it is enough to say, that all present were surprised at the variety and excellence of the specimens on the tables. In this respect, high as the character of Tompkins has heretofore been, she may be said to have exceeded herself." We cannot doubt, judging from the representations that have reached us, that the meeting was in all respects a most gratifying one, and calculated to give a decided impulse to the cause of agricultural improvement in that part of the state.

Notes for the Month.

Correction.—In the communication of Commentator, in our December number, in the last line of the second column, instead of "prevents all shaking," read prevents all choking; and in the 17th line of the third column, instead of "grown state," read green state.

The Farmers' Register.—The 10th vol. of this publication closed with the last year, and with it terminated the editorial labors of Edmund Ruffin, its able conductor and proprietor from its commencement. He has disposed of it to T. S. Pleasants, a gentleman well qualified to succeed even Mr. R., by whom it will hereafter be edited and published. A new series will commence with the present year. Petersburg, Va., monthly, 64 p. 8 vo. at $5 per year.

The New Genesee Farmer.—Mr. Colman having determined to spend a year or two in Europe, this publication has been transferred to Messrs. Crosman & Shepard, by whom it will hereafter be published. Mr. Colman will continue its editor till April, and will be a regular correspondent through the year. The paper is to be enlarged at the commencement of a new vol., this month, and the price raised to $1,00.

"The Indicator: *a Miscellany of Self-Improvement*," is the title of a magazine published in New-York, by J. D. Lockwood, every alternate month. Each number contains 64 pages, and is embellished with an engraved frontispiece. Price $1.50 per year. The first three numbers have been laid on our table, and their perusal has afforded us high gratification. It is devoted to "the discussion of principles that promote the acquisition of knowledge, the culture and discipline of the mind, and the formation of character," and we should rejoice to see it take the place, especially in the hands of our young men, of the numerous "popular" magazines which are so rapidly spreading over the country, to the great detriment of a more substantial and useful literature.

American Turf Register.—The December No. completes the 13th vol. of this work, now the oldest magazine in the country. It is embellished with a beautifully executed portrait of the celebrated racer "Boston," on steel, and an outline of "Bee's Wing," a famous English race horse. To the breeders of blood horses, this magazine is invaluable. A new vol. commences with the year. Terms, $5,00 per year. W. T. Porter, Esq. Editor, New-York.

Fat Cow.—Mr. L. V. V. Schuyler, of Watervliet, in this county, recently slaughtered the six year old Durham cow, which he exhibited at the late State Fair. Her weight was as follows:—The four quarters 890 lbs.; tal- tallow 150; hide 93; total 1,113 lbs. That the beef was of the best quality, we had sufficient proof in the fine steak sent us by Mr. Schuyler.

Agricultural School.—T. Fanning, Esq. one of the editors of that excellent paper, the Agriculturist, at Nashville, Tenn., proposes to open an Agricultural School at the commencement of the present year. As it is an experiment, he will limit the number of pupils the first year, to twelve. We rejoice to see a gentleman of his talents and energy, engaging in such a work, and of his success we cannot permit ourselves to doubt.

The late State Fair.—Adam Ferguson, Esq. of Woodhill, Canada West, who acted as chairman of the committee on Bulls, at our State Fair, has published a flattering account of his visit to our state, in the British American Cultivator. Of the stock exhibited, he says: "It is impossible for me to give any correct account of the host of fine animals on the ground. I was aware that much attention had been paid to Short Horn Stock in New-York and adjoining states, but I was not prepared to see animals of symmetry and beauty, which might have competed successfully in any British exhibition. I was much pleased with the sheep pens. Leicester, South Down, and Cotswold, in high perfection. The great size and fine form of the latter, will be a sure panacea for renovating Leicesters when they become too fine."

Importation of Silk.—The Nashville Agriculturist states, that in the last twenty-one years, there has been imported into this country, the enormous amount of two hundred and thirty-eight millions of dollars worth of silk and silk worsted goods. From the experiments already made, there is no reason to doubt, but that these goods can just as well be raised and made here as in Europe.

Self-Foddering Barn.—One of our correspondents, Mr. J. Horsfield, in speaking of the self-foddering barn, a view of which is given in our last vol. at page 147, says:—"The appearance of the barn itself, upon paper, and indeed the whole arrangement and construction of its exterior, I will readily admit to be proper enough, and as Mr. Mitchell says, 'a sightly object;' but for the practical operation of self-foddering, it will undoubtedly prove a total failure. Of the interior arrangements he gives us no description, and we practical farmers are led to infer, that the whole space within, from the ground floor to the roof, is to be occupied by the hay; and if so, I would like to inquire of Mr. Mitchell, how the self-foddering operation is performed. It appears to me, that if he had had much experience in foddering or the management of hay, he would readily see that the rack after being once eaten out by the cattle to the extent of their reach, would need something more than the pressure of superincumbent hay to replenish it. And if Mr. Mitchell wishes to furnish hides for the tanner next spring, in my opinion he has only to enclose his cattle with such a barn, however well filled, without giving them the assistance of human hands."

Kentucky Corn Crops.—The Louisville Journal states that Mr. P. Chamberlin, of that neighborhood, raised an extraordinary crop of corn the past season. The rows were laid off two and a half feet apart, with a single stalk every 18 inches in the rows. Mr. C. had one acre measured, and the produce was 112 bushels. All the work which he gave his corn, was to pass a cultivator through it once. The ground was of the ordinary fertility of his farm. The season was very unfavorable to corn, inasmuch as not a drop of rain fell in July, the time at which the corn most needed rain.

Molasses from Corn Stalks.—Mr. Vaughn of Henry co., Tenn., has been successful in producing molasses from corn stalks, which is declared to be preferable to that made from the sugar cane. He ground the stalks in a very simple mill, which cost but six dollars, which was run by two horses, and produced 120 gallons of juice per day. Five gallons of the juice made one of molasses. He thinks sixty gallons of molasses may be made from an acre of corn.

Fatting Hens.—Paine Wingate, in the Maine Farmer, says his experience tells him that the following process is the best mode of fattening hens. Shut them up where they can get no gravel. Keep corn by them all the time, and also give them dough once a day. For drink give them skim milk. With this feed they will fatten in ten days. If kept over ten days, they should have some gravel, or they will fall away.

New Grass.—Capt. Ross, in his narrative of his Southern Expedition, describes a grass found on the Falkland Islands, which promises, according to the account given in the New Farmers' Journal, to be a valuable acquisition in all maratime districts. "Every animal here feeds on it with avidity, and fattens on it in a short time. It may be planted and cut like the Guinea grass of the West Indies. The blades are about six feet long, and from 200 to 300 shoots spring from one plant." A man will cut about 100 bundles in a day, and horses and cows would eat the dry grass from the thatched roofs in preference to good grass of other kinds. It loves a rank wet peat bog, with the sea spray over it. What is to hinder this grass from taking possession of the large tracts on our coast, now producing only worthless coarse salt or bog grass? It is called the "Tussack Grass."

Steam Rotting Hemp.—A discovery that promises much for the agriculture of the west, has been made, and the experiments made have been eminently successful. The great obstacle in the way of the Hemp culture, has been in the rotting; dew rotted being unfit for the principal uses to which that article is applied, and water rotting being injurious to the health of those engaged, as well as requiring considerable nicety in the operation. It has been found that hemp submitted to the action of steam, is rotted thoroughly in a few hours, and that the quality is of the very best kind. We perceive that Mr. Sullivant, the great corn grower and farmer, near Columbus, Ohio, has this year raised a fine crop of 40 acres, being his first attempt. Should the process of steaming succeed as well as is now anticipated, we may shortly expect to find the rich vallies of the west supplying the United States with hemp, instead of importing it from Russia, as we now annually do to a large extent.

Rule for ascertaining the weight of Cattle by measurement.—A correspondent sends the following from an English paper:—"Measure the girt close behind the shoulder, and the length from the fore part of the shoulder blade along the back to the bone at the tail, which is in a vertical line with the buttock, both in feet. Multiply the square of the girt expressed in feet, by five times the length, and divide the product by 21, the quotient will be the weight of the four quarters in imperial stones of 14 lbs. avoirdupois. Example:—If the girt be 6½ feet, and the length 5¼ feet, we shall have 6½ multiplied by 6½=42¼, and 5¼ multiplied by 5=26¼; then 42¼ multiplied by 26¼=1109 1-16; and this divided by 21 gives 52 4-5 stones, nearly; or 52 stones 11 pounds. It is to be observed, however, that in very fat cattle, the four quarters will be about 1-20 more; while in those in a very lean state, it will be 1-20 less than the weight obtained by rule."

PROPER TIME FOR CUTTING WHEAT.

THE readers of the Cultivator will recollect that we gave in the volume for 1841, page 127, some interesting experiments made by our correspondent, J. Hannam, Esq. North Deighton, Yorkshire, England, on this subject, which excited much attention; and in which he announced his intention of more fully carrying out the experiments upon which he considered himself as having but just entered. In the last No. of the Quarterly Journal of Agriculture, we find a most valuable, and as we conceive, conclusive paper on the subject of cutting wheat; being the result of the promised experiments, and which, as its length forbids our inserting it entire, we shall condense for our columns, in the tables omitting such fractions as have no important bearing on the question.

In the former case, Mr. H. selected only three specimens for trial, or specimens cut at three different times; in the present instance, five different cuttings, as follows:

No. 1,	reaped Aug. 12th,	stacked Aug. 26th.
No. 2,	" " 19th,	" " 31st.
No. 3,	" " 26th,	" Sept. 5th.
No. 4,	" " 30th,	" " 9th.
No. 5,	" Sept. 9th,	" " 16th.

At stacking the several parcels, a sheaf was taken from each, for the purpose of exhibiting samples at the Fair of the Wetherby Ag. Society, and the Show of the Highland Ag. Society. We ought to have stated that 20 perches of wheat, grown on soil of the same quality, and the same kind of grain, were reaped at each cutting. No. 1 was very green, only fully formed in the berry, and raw; No 5 was fully ripe. No. 5, in the sample, was bold, but coarse; while Nos. 1 and 2, were finer in the skin, but small, showing they had shrunk some. The raw cut No. 3, was unexceptionable, being as plump as No. 5, and superior to 1 and 2, in thinness and uniform clearness of skin. There was little difference between 3 and 4, except that the last was more rough than the first.

In February, the whole of each specimen was carefully threshed and cleaned under the immediate superintendence of Mr. H., as indeed was performed every other step of the process. The following shows the result as regards quantity:

No. 1,	gave 2¾ bush.	weight	11 st. 12 lb.	and straw, 22 st. 7 lb.
No. 2,	" 2½	"	11 st. 1 lb.	" 21 st. 3 lb.
No. 3,	" 3½	"	15 st. 10 lb.	" 20 st. 8 lb.
No. 4,	" 3 11-16	"	16 st. 6 lb.	" 19 st. 2 lb.
No. 5,	" 3½	"	14 st. 13 lb.	" 18 st. 0 lb.

Mr. Hannan now proceeded to test the value of the several specimens for milling, and each kind was ground and dressed by Mr. Hardcastle, one of the best and most experienced millers of the county of York, and the result was as below:

No.	Gross quantity.	Weight of Grain.		Weight of Flour.		Pollard.		Bran.		Waste.
	Bushels.	St.	lb.	St.	lb.	St.	lb.	St.	lb.	
1	2½	11	12	8	12		12	2	1	1
2	2¾	11	1	8	6		11	1	11	1
3	3½	15	10	12	6		12	2	1	5
4	3 11-16	16	6	12	3	1	3	2	5	9
5	3½	14	13	10	11	1	9	2	5	2

From the above table, the quantity of flour, seconds or pollard, and bran, per bushel of the wheat, may be deduced as follows, fractions omitted:

No.	Flour.	Pollard.	Bran.	Weight per bushel.
1	45	4	10	60
2	47	4	10	62
3	49	3	8	62 6-7
4	46	4	8	62
5	43	6	9	59 5-7

The same table gives the per cent of flour, seconds, and bran; or the quantity of each that 100 lbs. of grain would yield, fractions omitted:

No.	Flour.	Seconds.	Bran.
1	75 lbs.	7 lbs.	17 lbs
2	76	7	16
3	80	5	13
4	77	7	14
5	72	11	15

It thus appears that No. 3, is superior to all the other varieties; giving more per bushel than No. 5, by 6½ lbs. of flour; and a gain of about 15 per cent on the flour of equal measures of grain. 100 lbs. of wheat No. 3, makes 80 lbs. of flour; while 100 lbs. of No. 5, yields 72 lbs. showing an advantage of 8 per cent in favor of grain cut raw.

In grinding, it was found that No. 5 ground the worst, worse than No. 1. In No. 5, were a greater quantity of flinty particles which would not pass the bolt, than in any of the others. The bran from No. 5, was coarse and heavy; while that from No. 3, was "thin as a bees' wing."

The flour from the various wheats, was worth at the time, 2s. 6d. per stone, the pollard 1s. 3d. and the bran 10d. per stone. Taking the straw at the current value of 2d. per stone, real value of the respective cuttings will stand thus:

Total value of the product of twenty perches,

No. 1,	£1	8s.	7¾d.
No. 2,	1	7	7½
No. 3,	1	17	3
No. 4,	1	17	2
No. 5,	1	13	11½

An estimate of the value per acre, founded on the foregoing calculations, gives for the value of an acre of

No. 1. Cut a month before fully ripe,	£11	9s.	2d.
No. 2. Cut three weeks " "	10	16	4
No. 3. Cut a fortnight " "	14	18	0
No. 4. Cut ten days " "	14	17	4
No. 5. Cut ripe " "	13	11	8

The difference in quantity between Nos. 1 and 2, and No. 5, amounting to a bushel on 20 perches, Mr. H. thinks was more owing to the pillage of birds, (it being the earliest cut wheat in the neighborhood,) than to actual shrinkage, though the latter was considerable. To settle this point of shrinkage, he instituted an ingenious course of experiment with glass tubes and water, to determine the relative size of the berry of each kind. A number of these determined that between 3, 4, and 5, there was no difference; while it required of No. 1, 1,110 grains to displace as much water as 910 grains of either of these, and of No. 2, 1,005 grains. The actual value per acre, determined in this way, slightly changed the relative value of Nos. 1 and 2, making the first £11, 17s. 0d, and the second £13, 6s. 0d. Thus there was an actual loss per acre, of the green wheat No. 1, of £1, 14s. 8d, compared with No. 5; and of No. 2, a loss of 5s. 8d. per acre, compared with the same standard. On the other hand, No. 3, or that cut raw, showed a gain of £1, 6s. 4d. compared with the ripe, and of £3, 1s. per acre, as compared with the green No. 1.

At this point of his experiments, Mr. Hannam thus sums up the advantages, or rather profits of cutting wheat in a raw state, or a fortnight before it is fully ripe, rather than letting it stand till that period:

1st. A gain of 15 per cent of flour upon equal measures.
2d. A gain in the weight of straw of 14 per cent.
3d. A gain of 7s. 5d. in the value of every quarter of wheat.
4th. A gain of £1, 6s. 4d. upon every acre producing 28 bush.

The actual value of flour for the purpose of nutrition, depending in a great measure on the gluten it contains, a sample of Nos. 3 and 5, was analyzed by Prof. Johnston, and he found them to contain respectively, No. 3, 9.15 per cent of gluten; No. 5, 8.9 per cent of gluten. Thus proving that the wheat which gave the greatest quantity of flour, gave also the best.

It is unnecessary to pursue the able investigation of Mr. Hannam, farther. The result may be thus stated in his own words: "With an additional quantity of flour and straw, already considered, we have *a better quality of both*, a *better chance of securing them*, and a *saving in securing them.*"

In this country, the subject of the proper time for cutting wheat is deriving great importance from the liability of its being attacked by the mildew or rust; the evil of which might in a great measure be avoided, should experience prove that raw or even green wheat would lose less when cut, than when allowed to stand, after such attack. As having a direct bearing on this subject we may mention the following. A farming friend of ours, growing wheat extensively, found last season, that one of his fields of wheat, then in a very raw or green state, was badly struck with rust. He determined to cut it at once, and did so, amid the laugh, or the pity of his neighbors, who thought him little less than crazy. The adjoining field suffered little from rust, and stood till fully ripe, yet at threshing the wheat first cut gave the finest wheat and the best yield. Mr. Hannam mentions a similar instance in which it was remarked of a farmer who was cutting his wheat early, that he "had cut grass, and stacked muck," yet when threshed, it yielded four bushels per acre more than it was estimated at, and was sold for the highest price in the market. In this country, the same reason, arising from bad weather or a late harvest, does not exist here for early cutting, as in England, but there are others which render the subject of little less interest here than there; and the agricultural public of both countries, are certainly much indebted to Mr. Hannam, for the skill and perseverance with which he has pursued these investigations in all their parts.

SOWING CORN BROADCAST FOR SOILING, &c.

WE are gratified to learn from various sources, that the experiment so strongly recommended by Mr. Ellsworth, of the Patent Office, Washington, from his own experience, of sowing Indian corn for fodder, has been repeated by many farmers the present season, and in every instance that we have learned, with the best success.

In a visit to the farms of Mr. Bement, and Mr. Sotham, near this city, last autumn, both these gentlemen mentioned the subject to us, and stated that the quantity of food so produced, exceeded their highest expectations, and besides was of the very best and most nourishing quality. It was used in soiling. Had they seen fit to have cut and cured it for winter's use, and then cut it with a chaff or straw cutter, it is evident that nothing could have made a better food for almost any of our domestic animals.

John Welles, Esq. of Natick, Mass. has given in the N. E. Farmer of Sept., an account of an experiment made by him this season, in sowing corn, which was most satisfactory. One kind of corn used by him, was the common sweet or sugar corn. At the appearance of the spindle, the corn was cut, (Aug. 22,) and the yield was 13 tons, 1225 lbs. per acre. Another kind of corn was the Southern flat corn, sowed in rows. This was taken at the time of spindling, and the product was little over 21 tons to the acre. Mr. Welles ascertained by experiments made at different periods, that after spindling, there was a decrease of weight.

In an editorial article in the same paper on this subject, it is stated that "several years since, the editor's father weighed the produce of one square rod of rich land, sowed with southern corn in drills, and obtained about 37 tons per acre; and last week his brother, in Wenham, weighed the stalks from one square rod, similarly planted, but the ground less rich, and obtained at the rate of between 21 and 22 tons per acre."

In the N. E. Farmer, of Oct. 12, we have the following statement from Mr. Geo. Denny, of Westboro, Mass.:

"In 1839 and '40, I sowed corn in drills for green fodder. The last and the present year, sowed southern white corn broadcast, followed by the harrow and roller. Aug. 6th, with a careful hand, cut and weighed the corn on one square yard. The product gave at the rate of 52 tons and a fraction to the acre. Aug. 19th, for the purpose of testing the correctness of the estimate made on the 6th, and also of satisfying myself what might be expected from ground in proper condition to plant for the grain—with a careful and judicious person to assist, we measured and weighed with much care, and found the production was at the rate of 65 tons and a fraction to the acre.

August 22d, cut and weighed,	229 lbs.
Sept. 28, the same weighed,	71
Loss,	158

Or 69 per cent; giving, say 20 tons of dry fodder to the acre—which if well cured, is considered by some equal to 10 tons upland hay. Three bushels of seed, allowing some for the crows, is sufficient."

Mr. J. J. Marshall, of Conn., gives the result of an experiment made by him the past season, in the Farmers' Gazette. He sowed five-eighths of an acre, on land well prepared, at the rate of 4 bushels of common seed corn per acre, on the 18th of June, and covered with a small turning plow, very shallow. July 21st, the corn was between five and six feet high, and began to lodge. It continued to grow, except that immediately on the ground, which rotted, till it began to ripen, when on the 19th September, it was cut with grass blades and weeding hoes. The product was at the rate of 44,367 lbs. per acre. The product of one square yard, where the corn was not lodged, was at the rate of 130,580 lbs. per acre.

Fed out in the ordinary way in which cured corn stalks are usually fed, a large portion of them, and that the most valuable, is lost; but when cut, as they should be, in a straw cutter, the whole will be eat, and prove the most nourishing of foods. When corn is sowed for soiling or curing, it should be on rich ground, early in the season, or so that it may have the advantage of the hot months, both for growing and curing. Curing at a late period, would be difficult if not impossible.

MR. MILLER'S REPORT.

WE have been favored with a Report made by WM. MILLER, Esq. one of the delegates from the Henrico, Va. Ag. Society, to the late meeting of the N. Y. Ag. Society, at Albany, embodying his impressions of that meeting, and of the agriculture of the north generally, as far as it fell under his notice. We are able to give but a brief synopsis of the Report. The show of cattle and sheep, Mr. Miller thought very good, but the horses and hogs nothing to boast of. The straw cutter of Messrs. Botts & Burfoot, of Richmond, he considered superior in some respects to the northern ones, particularly for the south, in which opinion, the Committee of the Society, it appears, concurred with him. He also thinks the Virginia plows bettter adapted to their use, than the northern ones. Mr. Miller remarks that the introduction of threshing machines, and the small amount of hoed crops cultivated at the north, has deprived the southern farmer of the advantage he once possessed of getting his grain into market earlier than the northern one. The farmer of New-York frequently threshes his wheat as soon as it is cut, as he has no hoed crops, such as corn and tobacco to work over as the Virginia one has, and which he is obliged to attend to as soon as his wheat is harvested. Consequently the first gets his wheat into market, as early, or earlier than the last. Mr. Miller recommends an entire change in their system, and says that to achieve this, the best method will be to follow the footsteps of their northern brethren. The three field system generally pursued in Virginia, he condemns as destructive, and recommends in its stead, one of six. To illustrate his meaning, he gives for examples, two farms he visited near Lancaster; one of 40 acres, divided into eight fields, was cropped as follows:

5	acres in corn,	product	300 bushels.
10	" wheat,	"	340 "
5	" oats,	"	300 "
5	" rye,	"	100 a failure.
10	" hay,	"	30 tons.
5	" pasture.		

Mr. Myers' farm, 1½ miles from Lancaster, had 200 acres of land divided and cropped as follows:

30	acres in corn,	50 bushels per acre,	1,500 bushels.
40	" wheat,	30 "	1,200 "
30	" oats,	50 "	1,500 "
60	" hay,	1½ tons "	90 tons.
40	" pasture.		

Mr. Miller adds:—"Their farmers universally pursue the same system; every field is separated by fences. Corn, then oats, then wheat, then rye, then clover and timothy; they fallow one oat field, and one clover field for wheat, and they apply their manure to their wheat land, either plowing it in, or harrowing it in with their wheat. They use lime and plaster freely. So far are we behind the north in our improving system, that I consider we are fast asleep; and from what I learned whilst at the north, I concluded if we did not rouse one another, not many years would pass before the northern people would do it, and call upon us, as unjust stewards, to surrender our homes to those who would give a better account of their stewardship. The population of the north are very restless, and will emigrate wherever they can better their condition. Already some of them are making the experiment, by purchasing a large tract of land near Alexandria. I can draw no more appropriate comparison of the two sections of the country, than by comparing Virginia to a miser who locks up all the gold, or as Mr. Adams says, selling a portion of her patrimony for her yearly support, while New-York puts hers out at compound interest." Mr. M. enters into a comparison of the cost of working, on the three and the six field systems, and decides in favor of the latter; independent of the fact, that in the latter system the farm is constantly growing richer, and under the former is constantly growing poorer, till the soil becomes useless. Mr. Miller makes one suggestion, which strikes us as of great importance to the farmers of Virginia, that is, that instead of selling off all their cattle to be fattened in northern pastures, they should be fed at home, thus providing that supply of manure, the more careful management of which, is one great source of the superiority of Pennsylvania and northern farming.

CHOICE OF A BUSINESS FOR LIFE.

Much of our personal happiness, our relative standing in society, and the influence we exert on mankind, is depending on the first steps we take in the choice of a business for life. Every man should have something to do; idleness is a disgrace as well as an injury, and the young man who fancies he is going to live without exertion, has taken one step, and a long one too, to ruin. No matter what may be the respectability or wealth of his parents, a reliance on these, instead of a well founded confidence in his own powers, proves him to be either weak or wicked, or both. It may be asserted without the fear of contradiction, that taking a given number of individuals, there are more young men who turn out worthless, idle, and dissipated, among those whose parents are wealthy, than in any other class of society, and the reason is perfectly obvious; their expectations and their habits, are alike fatal to the industry and the patient effort required to form and discipline the body and mind to success in life. Wealth, separated from industry, is a curse to the possessor, and the most serious evil that can befal the young, is to have the idea impressed on the mind, that business of any kind is unnecessary.

If business of some kind is indispensable, a proper choice of business is not of less consequence to the individual. We are not believers that one man is born a poet, or a divine, or a lawyer, or a metaphysician, or a farmer, or a physician, more than another. The powers of the mind are unquestionably greater in some individuals than in others; but the same degree of power will render the person as successful in one pursuit as another, if the power is properly directed. It requires as much talent to be a lawyer, as to be a divine, a merchant, or a farmer, and no more. In all the pursuits and business of life, men of very little talent and energy of mind are found; but in all, knowledge, tact, and perseverance, are necessary to insure success.

To be useful to the world, to benefit mankind, to furnish an example which if followed, will make men wiser and better, should be among the first aspirations of the young; personal enjoyment, distinction, competence, wealth, are, or should be, secondary. As a general rule, that course in life which may be denominated the medium one, the path that avoids equally the perilous elevation of wealth, or the dangerous depression of poverty and want, will be found the one which unites the prospect of greatest utility with the greatest personal happiness. Competence, that condition in life equally remote from the insolence of wealth, or the cringing of poverty, is not less to be desired now than in the days of Agar, or less conducive to positive enjoyment. That pursuit, then, which best fulfils these indications, which gives time for the acquisition of useful knowledge; which gives the greatest assurance of a sound mind in a sound body; which inculcates and fosters sound principles of morality and honest industry; which avoids the fluctuations, the ups and downs of life, and invitingly leads the mind through the mazes and mysteries of nature, up to nature's God, must be the one best adapted to the wants of mankind, the one which will ensure the greatest happiness of the greatest number. It would, we believe, require but little effort, or reflection, to convince any one, that in the pursuits of Agriculture, in the profession of the Farmer, are to be found the conditions so essential to the prosperity of the individual. In the exciting but corrupting influences of the political wrangling, or the ceaseless struggle for the spoils of office, going on around him, he takes little interest; in the fluctuations of trade or commerce, he sees nothing that should endanger or disturb his equanimity; the theological or philosophical controversies of the day, battles fought over, perhaps for the thousandth time, he views in their proper light, as the offspring in most cases of dogmatic ignorance; and on his snug, paid for, and well managed farm, with the means of education, intelligence, and competence in his possession, he sees little to alarm in the signs of the times, and views with equal composure the failure of a bank, the blowing up of a cabinet, or the bursting of an immense speculation bubble.

We wish every parent, when deliberating on the choice of a profession for his son, every young man who. is setting out in life, and has its thousand avenues of pursuit from which to choose, before him, to carefully ponder these things. There are higher interests than whim, or fashion, or prejudice, to be consulted; and were this invariably done, we cannot doubt that widely different results would frequently be reached. Sounder views with regard to the dignity of labor would prevail, and the rush into the professions, by which they have been completely overdone, would have been checked at once. Let the young man, before he determines to abandon the farm, for the medical school, the theological seminary, the merchant's counter, or the law office, carefully count the cost, and calculate the probable chances of success. Let him run over the list of doctors, lawyers, ministers, and merchants, with which he has been acquainted, and see how many of them have increased their opportunities of benefiting mankind, or of acquiring wealth, over those they would have enjoyed, had they remained or become farmers. Let him compare the nature of their pursuits, its fluctuations, the wear and tear of health and conscience, the scramble for existence or money, with those of the substantial farmer, honest, industrious, well educated himself, and educating his children, taking a lively interest in all that is of real utility to mankind, while quietly managing his farm and its concerns. Few are aware how many failures among merchants and professional men, such an examination would disclose. Gen. Dearborn stated before the Massachusetts legislature, that he had ascertained by reference to the books of the custom house, the banks, the probate office, and the oldest merchants of Boston, that ninety-seven out of every one hundred engaged in trade, or in buying and selling, failed, or died insolvent. This seems a large proportion, but we believe any person extensively acquainted with mercantile affairs, will agree that the General is probably right. In the country, the failures will be rather less, but still so numerous as to cause a parent to hesitate before placing his son in a pursuit so uncertain. The editors of the Journal of Commerce, found that of about 1000 names and firms of business men, found under the letter B, in the directory for 1837, nearly one-half are not to be found in that of 1842, showing that this proportion have failed in five years. Have the doctors, ministers, and lawyers, been much more successful? Let all who are making a choice of business for life, examine for themselves, and answer and decide accordingly.

SHEEP IN THE WEST.

Our readers may remember that in a former volume of the Cultivator, we noticed a work called the "Western Shepherd," by Mr. Flower, of Illinois, in which many valuable notices of the introduction of fine wooled sheep, and particularly of the flock of Mr. Flower, into the western states, may be found. A late number of the Lowell Courier, contains a paper of great interest on the wool culture of the west, its prospects, and the vast field which the western prairies present for the production of fine wool. The writer takes the position that the prices of wool have fallen so low in comparison with the advanced prices of land in the older states, that fine wool can no longer be grown to a profit, on a broad or national scale, east of the Allegany mountains, since where the price of land ranges from 20 to 40 dollars per acre, wool must give way to other and more valuable products, wheat for instance. The numerous experiments made within a few years, of which Mr. Flower's may be considered one of the earliest and most important, have proved that the western prairies are admirably adapted to the production of wool, particularly the finer kinds, and that at present prices, it will pay far better than any other product. It is calculated that in Illinois alone, fifteen millions of acres of prairie exists; and the quantity to be found in Wiskonsan, Iowa, and still farther west, may be said to be limitless. As population increases, the wolf, which has been the most formidable impediment to the increase of sheep, must disappear, as there are no mountainous districts to afford him shelter; indeed, in a large part of Indiana and Illinois, this evil may be said to have already passed away.

The experiment and experience of Mr. Flower, is important and valuable in more respects than one. His own statement of the matter, from the work alluded to, is as follows:—"The history of my own flock, kept in the southern part of Illinois, is favorable to the fine wooled breed. They are from the Merinos of Spain, procured just before the French overrun the country. Sir Charles Stuart, the English Ambassador, purchased the Royal flock. He shipped them after a hurried drive, scarcely out of reach of the pursuing enemy, some hundreds of miles. Six thousand only, reached the shores of England; and after the lapse of a year, two thousand sheep survived. These were purchased by my father. * * Some additions were afterwards made from the Paular and Escurial flocks. When I emigrated to this country, in 1817, I brought with me, six of the finest animals of the wool bearing species ever brought to this country. This is the origin of my flock; they have been kept on the same district and on the same farm, where I now reside, ever since. No deterioration of the wool has taken place; on the contrary, the wool fibre of them is somewhat finer. Eighty ewes, purchased of Mr. Beecher, at Lancaster, Ohio, formerly from the Steubenville stock, has been the only addition to the pure bred stock."

Mr. Flower has this year brought his wool to Lowell, where it was purchased and stapled by the Middlesex Company. The wool has proved to be of a very superior quality, and the several sorts received the highest prices; thus proving that Mr. Flower has exercised much skill as a breeder, and that the prairies are well adapted to the production of the best wool. For 25 years, Mr. Flower's flocks have for seven months in the year, pastured on the wild grasses of the prairie, and have kept fat and in fine health. We find in the article of the Courier, one statement to which we invite the attention of our readers, as we believe that overlooking the facts stated, has been the means of seriously injuring the qualities not only of carcass, but of wool, in many of our best eastern flocks:

"A single good quality in wool, urged beyond a given point, at the expense of other qualities, becomes a fault, and the breed is then said to run out. A fault early perceived in the Saxony fleece, has increased in some of our finest flocks to an alarming extent. The wool grows too thin upon the pelt, and the fibre, though extremely fine, has a silky, rather than a wooly appearance. The cross between the old Merino and the Saxon, corrects this quality, but is liable to one objection. The Merino fleece has too much gum. The fleeces from the finest of Mr. Flower's bucks, although a shade less fine in fibre, than the finest fleeces of some of our eastern flocks, have retained to a singular degree, a peculiar softness, and the wooly quality of fleece so desirable in every description of wool. It has been a question with breeders for some time, where to find a new family of sheep with which to improve the breeds already here. It is now found, and in the right place."

A single glance will show the extent to which wool production may be carried in the West. Illinois alone, allowing only two sheep to an acre of prairie, might send abroad 30 millions of fleeces. The cost of transporting Mr. Flower's wool from his residence, to Lowell, was $2.12½ by inland navigation, per hundred lbs.; or $42.50 per ton. Compared with the cost of transporting the same value of any other product, this sum is a mere nothing, and shows how little the effect of distance from market affects the value of this article.

In seems then very probable, that the finer flocks of the east, will follow the course of the many that within the past year have moved to the west, and that their places will be supplied with coarser wooled flocks, which will at the same time supply the increasing demand in this country for mutton, and take the place of the Smyrna and coarse South American wools now imported from abroad. Great changes must, however, take place gradually, and the filling of the western prairies with fine wooled sheep, will require some years for its accomplishment. Still it will be done, and in the result may be traced another of the strong ties which will bind the east and the west—the strong tie of mutual self interest.

MR. WEBSTER'S FARM.

A correspondent of the N. Y. Com. Advertiser, has been giving some interesting details of his visit to Mr. Webster's farm, at Marshfield, and of the excellent order and system, as well as skill, with which every thing is there conducted. It appears that the Secretary of State is as much at home in farming, as in the halls of legislation; and that in the intervals of settling the affairs of nations, he has found time to attend to all the minute details of farm supervision. It must certainly be admitted an honorable fact, that many of the most distinguished statesmen of our country, have been among our best farmers. It is only necessary to mention Washington, Madison, Jackson, Webster, Clay, &c. as sufficient proof of this.

Mr. Webster, the past year, has made on his farm, about 400 tons of hay; several thousand bushels of roots; about a thousand bushels of corn; and other matters in proportion. He has a large number of excellent cattle of the best breeds, imported and raised on the farm, some seventy in the whole, and they well repay the attention they receive. His sheep are splendid. Selected by himself, in England, they are probably equal to any in the country. They are of the Leicester breed, and from one of them, Goliah, as it is called by the shepherd, 16 lbs. of wool have been taken at one shearing. His poultry yard is in keeping with the other parts of the establishment, containing the choicest kinds of fowls from every quarter of the globe. The farm contains about 1,300 acres, lying on the shore of the ocean, and the waves dash against the walls and throw their spray into his garden. There are about 300 acres of wood land, mostly planted by Mr. Webster, and the time is not distant, when the red deer will be as plentiful here, as it is in the wildest woodlands of the west. His mansion is surrounded with magnificent avenues of elms, and he still continues to plant, believing with Girard, "that it would be better to plant a tree to-day, though he were to die tomorrow."

We learn from Gov. Hill's "Visitor," that Marshfield is not the only farm possessed by Mr. Webster. He still retains the old family mansion and farm in New Hampshire, and though visiting it but seldom, it is kept in the best and most productive manner. His rooms, with an extensive library, and a bed, are reserved for his use, the rest of the mansion being occupied by his manager. We cannot but believe that Gen. Jackson at the Hermitage, and Mr. Webster at Marshfield, enjoy more real happiness and tranquility of mind, in the management of their farms, than while leading armies, or wielding the destiny of nations.

Columbia Floral and Horticultural Exhibition.—We owe our good friends at Hudson, an apology for having so long failed to notice their autumnal show, which was held at Hudson, the latter part of September. We intended to have been present, but the duties devolving on us in connection with the State Fair, prevented; and we are sure we lost a rich treat, for we are told by those who were present, that it was the handsomest and best arranged exhibition of Fruits and Flowers, they had ever witnessed. It was, says the Hudson Gazette, a truly splendid affair. There was a vast variety of fruits and flowers, displaying all the powers of human ingenuity, as well in the choice, as in the beautiful arrangement of the various materials of which the several pieces were composed.

Original Papers from Contributors.

FARMING IN WISKONSAN.

MESSRS. GAYLORD & TUCKER—Our soil and climate are well adapted to the CULTURE OF WHEAT, but the difference in the surface and climate here and at the east, made it necessary to adopt another course from that pursued there. We get a first rate crop, (perhaps the best, quality and quantity considered,) from the first breaking of the sward. The sod is turned over in June, from two to four inches deep, and then in the latter part of August or first of September, is dragged and backset, as we term it, or turned over again, and the wheat sowed, on 1¼ or 1½ bushels per acre. If sowed early, it covers the ground completely, and withstands the severest winters. It ripens earlier than the crop on old ground, and is generally rather plumper and cleaner, though it should not be cleaner, but it *is*, as there has been no opportunity for weeds to ripen and fill the ground. The crop when tolerably well put in, is an excellent one, on either opening, or prairie land; but after the first crop, some kind of protection seems necessary to insure a good crop on the prairie. It tillers out finely on old ground, but the soil is so mellow, that the surface is very smooth, and the snow not being deep it is blown off by the high winds, leaving the roots exposed to the action of the sun and frost. Hence on prairie, neither a summer fallow of stubble ground nor stubble ground itself, is very good for wheat. The most approved method of raising wheat on old ground, is to sow among corn as early as the last of August, and to cover it with a cultivator, and then gather the corn in baskets, and leave the stalks in the hill. They soon get broken down so as to admit the sun and air. The plants cover the ground, and are completely protected from the wind in the winter. As soon as the vegetation starts in the spring, the stalks are cut down and left on the ground. The corn is planted farther apart than is usual when the ground is intended for wheat. To be sure we lose our stalks for fodder, but that is not regarded.

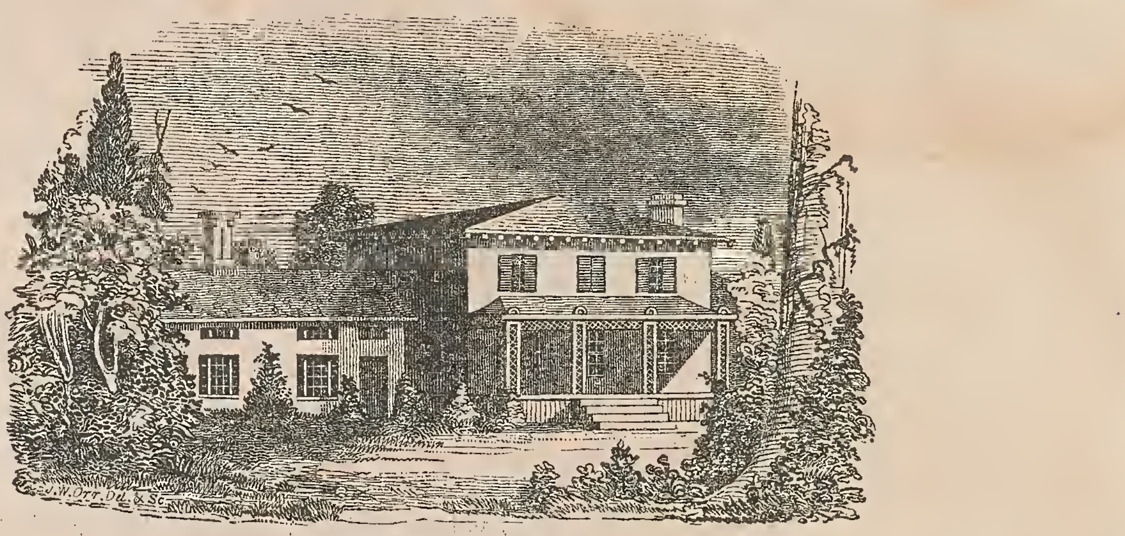
THE GRASSES.—Breaking up tame grass lands, has not as yet been tried here for wheat. It will probably succeed as well as the first breaking up, but the inhabitants get wild hay from the low lands, which answers very well. They do not seem to find any room to grow the cultivated grasses. We have sowed 10 or 12 acres of timothy —5 immediately after the first breaking—5 more after the second plowing, and 1½ on old ground. The first grew and covered the ground, but it was very hard, and the grass was light. It was cut twice, but the present season it was not worth cutting. Next year it will be sowed to wheat. The five on the second plowing, were thinly seeded, but produced a tolerable crop the first cutting; this year, that too, was nearly worthless. The last spoken of, was mowed this year for the first, and though the grass was rather thin, it was tall and heavy, with the longest heads I ever saw—some over 11 inches long. From the little experience I have had here, I should say that herds grass must be sowed very thick, on old land, deeply plowed, and then every year or two, at most, a top dressing of manure should be put on. Clover has been but partially tried in this section. It may not do very well on the prairie, but we have lands that will undoubted produce good clover.

SPRING CROPS.—For spring crops of all kinds, this country is very fine. Spring wheat is raised in abundance and with ease. It is a very sure crop, and does best after corn and roots; the difference between the two is hardly perceptible, though rather in favor of the latter. On good clean ground, after those crops, 20 and 30 bushels are an ordinary crop. Oats produce well—best after corn and wheat—though ours this year, were *very* smutty. They are the large Poland oats, I believe, and had as fine a growth as I ever saw. They were on corn stubble, but nearly a third smut. What is the reason? Is it the variety, or the ground? They were sowed 3 bushels to the acre, and grew very tall and stout. Corn does well here, and is in my opinion, the best crop of all to prepare land for any other. It does well after the grains, but it is *death* to it, if it be put after roots, especially ruta bagas. It will not do. Roots are easily raised here—grow large and rich—the only trouble is to prepare the ground properly. We plow three times before sowing. Our object is to let the seeds in the ground vegetate. If we did not, the weeds would choke them completely. They evidently exhaust the soil very much, but leave it mellow and fine for cultivation. Before wheat they are good, and I presume before oats, though I have not tried it as yet. The farmers here are paying some attention to raising sheep; though conveniences for manufacturing wool are as yet few. But the country is unquestionably well adapted for raising them. Very respectfully,

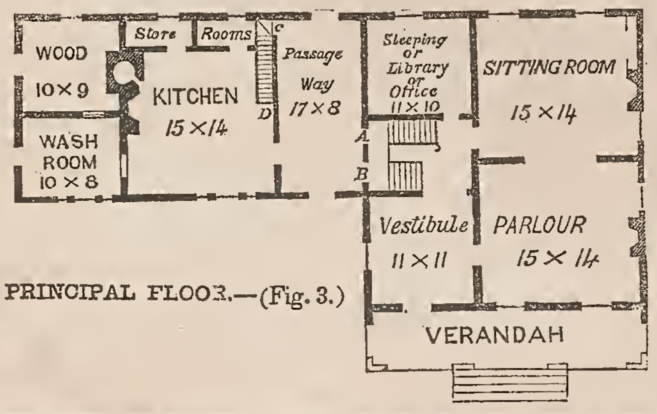
F. A. PHŒNIX.

Delavan, Walworth co. Wiskonsan, Nov. 19, 1842.

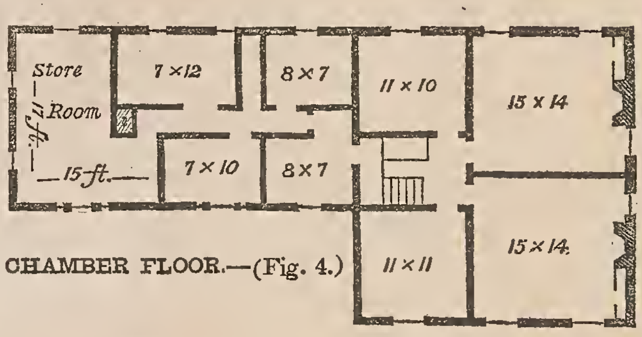
MESSRS. GAYLORD & TUCKER—I notice in the Dec. No. of the Cultivator, an article under the head of "Impure well water." Water passing through the "geodiferous lime rock" imbibes a portion of gas, very offensive to the smell, though not essentially injurious to health, and for which there is no convenient remedy. When it contains any considerable portion of gypsum, it is not only unpleasant, but to persons of feeble digestion, absolutely unhealthy. It also exerts an unfavorable influence upon certain animals, until accustomed to its use. Carbonate of lime is readily precipitated by boiling, and if a small piece of soda be placed in the tea kettle or vessel containing water for domestic use, the gypsum will be precipitated also. CHEMIST.


J.W. Orr, Del. & Sc.

ELEVATION.—(Fig. 2.)



PRINCIPAL FLOOR.—(Fig. 3.)



CHAMBER FLOOR.—(Fig. 4.)

DESIGN FOR A GENTEEL FARM HOUSE.

See Figs. 2, 3, and 4.

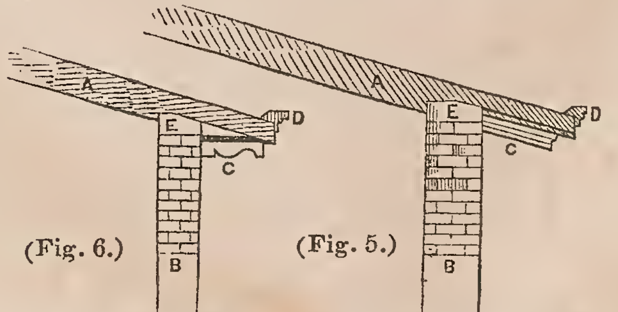
MESSRS. GAYLORD & TUCKER—I submit to yourselves and readers, the accompanying design for a genteel Farm House of moderate pretensions and cost. It is gratifying that this subject is at last receiving that attention, in part at least, which its importance demands.

In past years, the idea of a farmer's dwelling with any pretensions to taste, carried with it to his mind, extravagance and ruin; and this false notion was often fostered by the mechanic, who while able to put his work together in a substantial manner, yet never had an idea of design other than what his father and father's father practiced in days of yore.

The result of this has been, in very many cases, that our affluent and intelligent agriculturist inhabits one of those "shingle palaces" so inconvenient in their internal arrangement and so absurd in their appearance—the just object of ridicule. Many, very many of our beautiful landscapes are marred and deformed by these *wooden wens* on the fair face of nature. And these uncouth edifices were generally erected at double the cost of a more beautiful and convenient dwelling.

Another prevalent absurdity is the choice of material; for even in districts where good stone or brick are abundant, how often is the glaring white clapboard substituted therefor, than which nothing can be worse as regards taste or economy. A radical change in the rural architecture of our country is "a consummation devoutly to be wished."

This design is for a house 28 by 30 feet; first story 8½ feet high, chamber story 7½ feet high, with a wing. The principal floor of main building is about 3 feet above that of wing. The dairy rooms I would place in the basement of main house, occupying all the area under the parlor and sitting room. For butter making, this is altogether preferable to having the dairy rooms above ground, being cooler and less liable to sudden changes in temperature. For this I have the judgment of some of our best Orange County butter makers. A small private cellar under the library, and another under the vestibule is intended. The root cellar I would construct under the wing. The passage way in the wing may be used as an eating hall, except in very cold weather. The door A. (fig. 3,) opens upon the stair which descends into the dairy rooms and cellars adjoining. Door B. opens upon the landing, from which four or five steps conduct to the main floor. Door C. opens upon stairs leading to sleeping apartments of the farm servants, and door D. to stairs descending to vegetable cellar. A door on the landing of principal stairs will connect with attic of wing. If the small room marked *office*, is used for that purpose, it would be proper to have a door opening from it into passage way in wing.

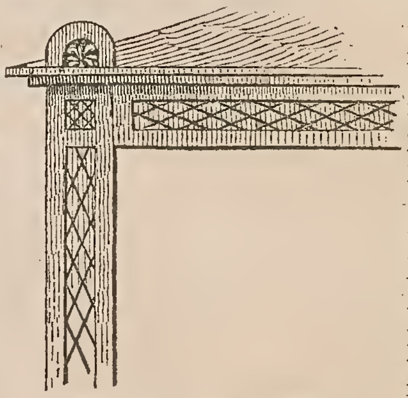


(Fig. 6.) (Fig. 5.)

The roof of the main building, I would recommend to be of tin or zinc, for many reasons; shingles however may be used, (except in the gutter at the eve,) where they are much cheaper or more abundant. The roof of this building it will be seen, projects pretty boldly about 2 feet over the line of the exterior wall. This not only secures a good, dry, and well sheltered house, but it gives the dwelling at once something of a superior air. This construction of the roof will be easily understood by mechanics, as it is formed by employing rafters of sufficient length to project 20 or 22 inches over the face of the wall B. These may be ceiled on the under side, so as to show the slope of the rafter, (fig. 5.) or the finish may be made to show a flat ceiling under the projection, as in fig. 6. In either case the appearance of support is increased by adding plain brackets (C,) about 4 by 5 inches and nearly as deep as the projection of the roof.

The roof of the wing should project rather less, and 12 or 14 inches will be sufficient, and the brackets may be omitted here. The gutter, it will be perceived, is formed at the edge of the roof, and in this, tin or zinc had better be used. To carry out this building properly, working plans, details, and a full specification might be necessary, which can be furnished upon application. The estimated cost of this building is $2,000 in Orange county, either of stone or brick, probably a little less of wood. In other places it would be more or less, according to the price of materials. Yours, with esteem,

Newburgh, Nov. 1, 1842. T. M. NIVEN.



Section of Verandah.—Fig. 7.

PREMIUM CROPS.

THE following premiums on field crops, were awarded by the Wayne County Agricultural Society, at its meeting, 11 mo. 15, 1842:

To. C. S. Button, for the best crop of wheat, 5 acres 11 rods, yielding 151¾ bushels, or about 30 bushels to the acre, $8,00.
To C. S. Button, for the best crop of corn, 2 acres, 76 rods, at the rate of 99 bushels, 6 quarts per acre, $5,00.
To Marvin Roundy, for the best crop of oats, 4 2-3 acres, 312 bushels, or about 67 bushels per acre, $4,00.
To D. & G. W. Kenyon, for the best crop of potatoes, 72 rods, 169½ bushels, or about 376 bushels per acre, $3,00.
To Rocher & Miller, for the best crop of ruta baga, half an acre, 549 bushels, or 1098 bushels per acre, $3,00.

The following is an abstract of the statements of the competitors:

Dr. Button's wheat was the white flint—the previous crop was corn, manured 20 loads to the acre—the ground was prepared by splitting the hills, harrowing down, and plowing once—8½ bushels were sown the first week in October, and harrowed once each way.

Dr. Button's corn was the Dutton—the previous crop peas and oats—the ground plowed twice in May, and at each plowing manured with 12 loads coarse manure—harrowed and planted the 12th of May, in rows 2 feet 8 inches, by 2 feet—12 to 16 seeds in a hill, afterwards thinned to 3 or 4 plants in the hill—after culture with cultivator and cutting out weeds twice.

M. Roundy's oats were after corn, unmanured—10 bushels of seed sown.

D. & G. W. Kenyon's potatoes were a mixture, mostly a red variety—the ground covered with manure, plowed in, and planted in drills 3½ feet apart—the potatoes cut in 3 pieces, and planted one foot apart in the drill.

Rocher & Miller's ruta bagas—ground a elover sod, mowed last year, plowed about the first of May, well harrowed, sheep manure applied at the rate of about 24 loads to the acre—about the first of June, plowed and harrowed—planted 8th of June, in drills 20 inches apart, and 8 to 16 inches in the drill—hoed twice, and harvested Nov. 5. J. J. Thomas, *Cor. Sec'y.*

Orange County.—The first premiums of the Orange Co. Ag. Society, for Corn and Oats, were awarded to F. J. Betts, Esq. of Newburgh—the corn producing 205½ bushels of ears to the acre, and the oats 77 bushels. Of the cultivation of these crops, Mr. Betts, in a letter to the editors of the Cultivator, says:

"You correctly suppose that my corn was 205½ bushels of *ears* per acre: but that was the average yield of the whole field, containing 4 5-8 acres.

"The corn is a crop of Dutton and the large Connecticut yellow corn, obtained by planting the two in the same hills; the seed thus obtained, produces a very handsome ear, which is earlier than the old fashioned corn, and yields well, as the product of my field shows. The whole crop is very handsome, and scarce an ear which is not fit for seed.

"The field upon which it grew, was a tough green sward, plowed in the early part of February last, (when the ground was free from frost,) and manured with fifteen wagon loads per acre, of a compost of *muck and barn yard manure,* in about equal parts; the muck having been spread over the surface of the barn yard during the winter. In planting, the corn was covered with half a shovel full of the same compost, *instead of earth,* and two bushels of salt per acre was spread broadcast over the field, immediately before planting; the field was then cross plowed, and the corn planted about 3½ feet apart; it was twice plowed and hoed, and had the cultivator run through it once; it was very slightly hilled, and had about an average of four stalks left in each hill.

"The oats were raised upon a field cultivated the year before in the same way, except that about *twelve* loads of manure per acre, were used, instead of *fifteen.* The oats were sowed as early as the ground could be got in order for them, at the rate of *three* bushels per acre."

IMPORTATION OF WOOL, &c.

Messrs. Editors—Among many of your farming readers, are wool growers, who have received too favorable an impression respecting the advantages they are to receive from the present protective tariff bill. Having the full Report from the Secretary of the Treasury, communicating the statement of the Commerce of the United States for the year ending Sept. 30, 1841, I will extract the statement of imports of Wool in that year. All wool, not exceeding 8 cents per pound at the country or port purchased, was admitted into the United States free of duty. I will name the place from whence imported, and the quantity in pounds, and value in dollars:

Whence Imported.	*Pounds.*	*Value.*
Danish West Indies,	89,910	$7,115
Dutch West Indies,	19,099	1,190
England,	228,366	17,158
Gibraltar,	72,466	4,328
British West Indies,	50	4
British N. American Colonies,	7,160	574
France on the Mediterranean,	213,820	14,720
Spain on the Mediterranean,	7,894	570
Italy,	194,414	13,301
Austrian Adriatic ports,	44,564	3,399
Turkey,	2,546,289	186,010
Morocco,	435,573	31,628
Texas,	310	22
Mexico,	287,129	21,830
New Grenada,	197	16
Venezuela,	684	50
Brazil,	118,712	8,228
Cisplatine Republic,	665,879	35,811
Argentine Republic,	8,870,799	531,025
Chili,	458,846	31,124
Peru,	21,461	1,477
Africa generally,	60,695	4,706
Patagonia,	65,747	3,995
	14,409,764	$981,281

Whole amount of wool admitted duty free, is fourteen millions four hundred and nine thousand seven hundred and sixty-four pounds, valued at only nine hundred eighty-one thousand two hundred and eighty-one dollars, which is about six and a half cents per pound, imported from twenty-three differents ports and countries, more than one-half of which, from one Republic in South America.

All wool unmanufactured, exceeding eight cents per lb. imported in the same year, is only 596,646 lbs., valued at $173,672, which is over thirty cents per lb. value at the place from whence exported. 278,415 pounds came from England. These are facts that are not without interest to the wool grower, and are worthy of reflection.

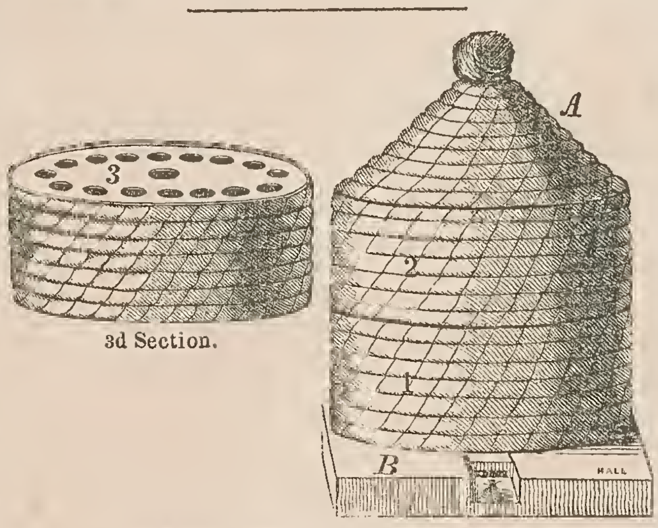
Although we had but little over half a million of lbs. of fine wool, paying ad valorem duties, imported last year, our own wool has been a drug in market. Then where is the competition? Is it not in the fourteen and a half millions of coarse wool admitted duty free? If this wool is manufactured in the United States, and put upon our backs, does it not take the place of so many yards of cloth that might be manufactured from our wool? Some say that it is very coarse, and is only used among the negroes; but that is a mistake. We have machinery in Vermont, that manufactures large quantities of this wool into cloth—a very good article—and is worn by *the whites* of this state. Another will tell you that one of the glorious acts of the last Congress, was to lay a duty on all cheap wools. Well we will admit that on unmanufactured wool, the value whereof, at the last port or place from whence exported to the United States, shall be seven cents or under, per pound, there shall be levied a duty of five per centum ad valorem; that is, if sixteen pounds of wool shall cost in South America, one dollar, including all costs and charges except insurance; then on this sixteen pounds of wool is levied five cents, *or about three and a half mills per pound.*

These young Republics of South America, and many other countries which grow this cheap wool, are yet in their infancy in sheep husbandry. We shall undoubtedly receive greater and increasing supplies for many years to come, from these ports. On account of the small duty levied, they will be obliged to accept a trifle less for their wool, which they will be better able to do as they improve in the art of sheep husbandry.

It is the "scarcity of gold that makes it dear." The same adage may apply to wool. If our markets are flooded with the raw material, there will be no need of the manufacturer paying from forty to sixty cents per pound. Such improved inventions have been introduced in machinery, that cloths can be manufactured from these coarse wools, such as the laboring man need not be ashamed of.

If wool remains near the low ebb that it has now arrived at, the prospects of a ready market for the wheat of the western farmers with our New England farmers and mechanics, as heretofore, cannot be so great nor flattering; for we shall be obliged to consume more brown bread, and endeavor to raise some wheat, which we can do almost wholly within ourselves.

Weybridge, Vt. 1842. S. W. Jewett.



3d Section.

STRAW BEE HIVES.—(Fig. 8.)

Messrs. Gaylord & Tucker—This cut (see fig. 8,) is a perspective drawing of my sixth class of Bee Hives. This is a swarming hive, made of straw, in sections, with an absorbing cap placed over the top, and a canal bottom board underneath, represented here as standing on a frame, made like a common table frame, 18 inches high, before the leaf is put on. The 3d section, marked 3, which may always be used as a chamber in the summer season for boxes, globes, tumblers, &c. is taken off in October, and the absorbing cap marked A, supplies its place for wintering the bees, and is again removed early in the spring, to give place for the third section; which may be used as a chamber, or it may be filled with honey, as most agreeable to the owner. Hives, made of boards, possessing principles (in some respects,) similar to this, have been used, long since, in Europe and here; but the true principles of ventilation, as well as the exhalations of the bees, were not well understood, and the hives have gone out of use in all cases, after a trial of them a few years. Even the great French Apiarian who invented it, lost his whole stock except one hive, by its use, and this he gave to his son: but the son would use none of them. This gentlemen, M. De Gelieu, wrote an excellent treatise on bees, which I wish was more generally read. But to the hive; the sections should be made as near alike as can be. Each section should hold a little more than half a bushel. The straw is confined to the top board by sewing the strands of straw with strings made of bark, basket stuff, or coarse twine, until the section is finished. Then the section is turned top down, and wood pins are drove down through every strand to the top board, and cut off level with the bottom. These pins should be within 4 or 5 inches of each other, all around the section, so as to strengthen the hive by keeping the straw perfectly in place, and prevent the hive from settling out of good shape in any place, when brought into use. The top board of each section should have at least 12 two inch holes made by a center bit, to facilitate uniformity of animal, or rather insect heat, in all the sections, to promote the growth and bring to perfection the young broods in the summer, and likewise afford the most favorable opportunity for the vapor of the bees, caused by their breath and exhalations, to rise into the cap, and there become absorbed by the straw, and dissipated by the surrounding atmosphere, which greatly prevents the accumulation of frost and ice in the hive: thus preventing the death of the bees by freezing.

I am aware that some objections may be urged against the use of straw hives, especially as they afford a ready harbor for moths and other insects, inimical to bees; but this objection no longer exists, for it is now well known that the eggs of moths will not germinate where whitewash is used. It is believed that the caustic nature of lime destroys the principle of life in the eggs of all insects; and straw hives that are well made, are easily whitewashed.

Much may be said in praise of the common straw hive. They are greater non-conductors of heat and cold, than any wood hives, and are much better for wintering bees in than any wood swarmers; the absorbing qualities of the straw prevents frost and ice from being formed in so great quantities in the hive in the winter, and their liability to harbor mice is completely obviated by the use of the canal bottom board, a description of which has already been given in the Cultivator, and answers all the expectations I then anticipated, and more than I expected at that time. In trying the experiment last winter, I found in warm turns of weather my bees sallied out of my hives, and many were lost by falling on the ground, and never returned; but not so with any of my hives that rested on the canal bottom boards. It is found that the light enters the hive in so indirect a manner, that all there is in the interior of the hive is but twilight, and the bees remain perfectly quiet until they are so affected by the warm atmosphere that they sally out into air, so warm as to enable them to return to their hive without loss of many of their companions. But to the hive again. When the hive is made in sections like this, it needs no sticks, as each section is only six inches deep besides the top board, and 18 or 20 inches in diameter. In new countries, where lumber is scarce and expensive, the top board may be made of bark pealed from large trees, pressed and dried, and the strands may be made of prairie grass. In constructing hives of any sort, the builder's attention should be directed to two points which are believed to be of the highest importance to the apiary. First. Bees should not be compelled to take any unnecessary steps after they enter the hive, to relieve themselves of their burthen. How can a man do business to advantage with a heavy load, and grope in darkness, wandering through a dense crowd, winding his way to the fourth story by the sense of touch only, constantly meeting others stronger than himself returning, and pushing him back? Second. The hive should be so constructed as to enable the apiarian to preserve the young broods from a chill in cold turns of weather in the spring months, which has been considered one principal cause of complaint among bee masters, that their bees do not swarm. As I have once published an article of some length on this subject, I will only remark here, that the principal cause of this complaint this year, has originated from causes perfectly new to me; a fact that I never discovered until this season, 1842. It is this: blossoms this season, have yielded so little pollen, that the bees were unable to supply the young with a sufficient quantity of new bread to hasten along the young broods so as to produce swarms, until the season was too far advanced for the bees to form new colonies with safety. It is now believed that bees never feed their young with old bread, at any time when they can traverse the fields. But as a full illustration of this subject will require an article too long for this place, I only remark that as this hive is subtended, it is used different from other hives.

When the combs in the first and second section, get loaded with bread and the cocoons of young bees, so as to interrupt in the least, the perfecting the young, the hive is raised up from the bottom board, and the 3d section is placed where the first section stood; as this is done early in the spring, the bees will replenish themselves with new brood comb. This may be done as often as desirable, at the same time the section coming on top may be emptied of its contents and used as a chamber for boxes, or as a receptacle for honey. I have four more classes of hives, which I intend to bring before the public in due time, making ten classes in all, most of which may be converted into non-swarmers when desirable, and reversed to swarmers again at pleasure.

Respectfully yours, John M. Weeks.
West Farms, near Middlebury, Vt. Oct. 8, 1842.

TO WESTERN EMIGRANTS.

Another "Trip to Mill."—*Fatal effects of venturing to cross an unsettled Prairie in a stormy night.*

Editors of the Cultivator—How often I have been asked by my eastern friends, whether my account of the "*first trip to mill,*" published in your paper in June, 1841, was "founded on fact." These inquiries show how little you that dwell in cities and densely populated places, know of the hardships and perils of life that the pioneer endures. "How little do we know how to appreciate trifles until placed in a trying situation."

In that article, I spoke of the danger of life to the teamster, who attempted the perilous passage of the prairie in a cold winter night. I also spoke of the beautiful weather of November, usual to this region. Just such weather was the first part of the present month, but what a change suddenly came over the face of nature—a change that brought desolation into the cabin of an afflicted emigrant.

The reader of the narrative I am about to give, will undoubtedly say that there was a great lack of prudence and forethought in the emigrant, and it is upon that point that I wish him to be advised, and not attempt to buy his knowledge with an experiment that may cost him his life.

The 16th of November was a delightful sunny day. "I think," says Mr. W., (one of my *neighbors,* for he only lived a dozen miles off,) to his wife, "that I will go to mill to-day, it is so pleasant." "I wish then you would go down the river, for they make the best flour there, and as wheat is only worth three shillings a bushel, we can afford to eat good flour."

The wagon was loaded, and away he went, under the full expectation of being again by his own fireside on the evening of the next day—the distance being upwards of 40 miles.

He was a stout robust man, in the prime of life, inured to fatigue, and so fearless of cold, and so deceived by the appearance of the weather, that he left home thinly clad, and totally unprepared to resist the rigor of the storm that came on next day.

On the next afternoon he started back with the intention of driving home that night. Just at sundown, he stopped to warm at a house, from which to the next, it was 8 or 10 miles across a bleak prairie, without a bush to shelter or tree to guide. His course was east. Here a most furious southwest snow storm came upon him. Who can picture the horrors of that night? Little did the wife and children of the doomed emigrant think, as they gathered around their warm hearth, what the husband and father was then suffering. During all the next day, the storm raged with unabated violence. The cold was intense, and the snow filled the air so as to veil all objects in obscurity.

But they did not look for "the return from mill" on this day, but towards the close of the next, eyes were anxiously strained in that direction; yet the night passed, and he came not. The next was the sabbath—usually a day of rest and thanksgiving in that household. Doubt not, many an anxious prayer went up for the safe return of their best and absent friend.

Night closed upon saddened hearts, full of fearful forebodings. Can you fancy the horrors that haunted the pillow of the good wife all that night. See how she starts at every sound. Do you remember I told you in the article I have before alluded to, how remarkably quick my ear had become. Fancy the same of hers. How anxiously she listened for the cheering sound of that well known voice—how the childlike inquiry of the early morning, grated upon her ear—"has father come yet—why, what *has* become of him?"

While a consultation is holding during the day, as to "what shall we do;" "hadn't we better go after father," a noise is heard at the door. "'Tis he—there's the horses." No—a stranger enters. He inquires "is Mr. W. at home?" "No." "Hain't he been back from mill yet?" "No! and do tell us where did you get his horses?" They came up to my house yesterday morning, with halters and collars on, and I thought they had got away from him, and perhaps he had come on home."

"Oh! then he has perished in the storm." "No, for then the horses would still have been attached to the wagon."

Ah! thou blessed comforter, hope, that never lets the heart sink whilst thou in thy faintest form holds forth a single ray. There was dread fear, but hope prevailed, until a messenger, with utmost speed, had learned when he left the mill, and traced him up until the spot was reached where he was last seen alive. Then hope forever fled.

On Tuesday, the fifth day after he was lost, a strong force of men and boys, dogs and horses, were spread over the prairie, searching in every direction, between the groves, near the road he should have passed. Towards night, some of the foremost of those who had spread away to the north some 6 or 8 miles, raise a shout, and away they course at top of speed, toward a small black speck seen in the snow. 'Tis the lost man's wagon. He had missed his road, and after wandering, no one knows where or how, had fallen into another road leading to the north, and upwards of 20 miles between houses. Here lay the harness upon the ground, cut from the horses. The reason why he had been compelled to stop, was plain. The bolt that held the doubletree on the wagon, was lost. The bags had been set up in the wagon to break the face of the storm, and a bed made of bran, but no one occupied it now.

Experience and necessity teaches the pioneer of the wilderness to discover tracks and "signs," where an unaccustomed eye would fail. 'Twas such an eye that got upon the lost man's trail and followed it near eight miles, where he had pitched forward upon his face—the strong man struggling with the stronger one of death—can you doubt which prevailed?

Oh how sad, how solemn, how different was this return, from that one before depicted to you, from "the first trip to mill." Then, all was joy and gladness in the emigrant's cabin; now, the wail of wo is poured out in sorrow over the rigid frozen corse, whose next and only trip will be to the dark and silent grave.

Reader! the motto of this paper is, "to improve the soil as well the mind!" I have given you a subject to improve upon. May you ever be prepared with care and prudent foresight, to guard against the storms that are likely to beset your path through life; and while you gather around your winter firesides, musing over this melancholy tale, let your hearts soften towards those who are buffeting the adverse and chilling blasts of life, and stretch forth the helping hand ere they fall into that cold embrace from which no human hand can warm them into life again.

I hope many of you have not forgotten that old friend of yours of the Western Prairies, and who you will recognise, when I tell you that I am still the same

Solon Robinson.

Lake C. H. Ia. Nov. 25, 1842.

"Loss of manure, is loss of crops."

AGRICULTURE OF VIRGINIA.

Farming of Mr. William Weaver, *of Rockbridge Co. Virginia.*[*]

Mr. William Weaver, of this county, one of the most judicious practical farmers I have ever known, has for several years past, been cultivating a portion of his extensive estate, with distinguished success, upon a system entirely novel in this section of country—the Valley of Virginia—a brief outline of which may not be unacceptable to some of your readers.

The traveler from Lynchburg to Lexington, up the picturesque and romantic valleys of the James and North rivers, cannot fail, if he will but lift up his eyes as he approaches the mouth of Buffalo, about 9 miles from the latter place, to observe, at the distance of two or three miles up the river, a cluster of precipitous hills—the outposts, as it were, of the Blue Ridge—proudly rearing their green and rounded summits above the adjacent valleys, and apparently covered to their very tops, by the hand of man, with the richest and most luxuriant vegetation. These steep and rough hills, most appropriately designated by Mr. Weaver, as the "Highland Farm," against which the North river dashes its foaming torrent, and which slope in every direction from their summits to their base, presenting angles of from twenty to fifty degrees, constitute the land in question.

About ten or twelve years ago, Mr. Weaver purchas-this farm, now embracing upwards of 800 acres, in several distinct tracts, at an average price of $2 an acre, principally for the purpose of procuring the wood, with which it was then covered, with the exception of about 100 acres of cleared and exhausted land, to supply his iron establishment with coal. The native growth consisted of oak, hickory and dogwood, with large pines interspersed. The soil is a red gravel, strongly dashed with slate, reposing on limestone foundation. So unpromising an appearance did this land present for agricultural purposes, that when Mr. Weaver told his neighbors he intended to make a corn farm of these poor and steep hills, a laugh of derision was the only encouragement he received.

As the clearing progressed, Mr. Weaver divided the cleared land into four fields, one of 100 acres for standing pasture, and three of about 120 acres each for cultivation. The first field of new ground was broken up early in the spring, with McCormick plows, drawn by two mules each, and cultivated in corn. The crop did not exceed an average of fifteen bushels to the acre. In the fall, the field was seeded in wheat, upon which, late in the winter, the usual quantity of clover seed, and half a bushel of plaster, were sown to the acre. After the wheat was removed at harvest, the stubble was gleaned by the stock of hogs. Very early next spring, an additional half bushel of plaster was sown to the acre over the whole field. During the spring, summer and fall, not a single animal of any kind whatever, was permitted to invade the clover field, nor was any clover cut, except a very small quantity on the most luxuriant spots, for the use of the mules while at work on the farm. The next winter, however, the stock of hogs was kept in the field, which was plowed up early in the spring, and again planted in corn. In the fall it was seeded with wheat, and in the winter sown with clover and plaster. The other fields, as they came successively into cultivation, were treated precisely in the same manner, with the exception of the standing pasture, which has never been plowed up since the first course of crops, and of the hundred acres of exhausted land, above spoken of, which, being too poor to produce corn, was sown first with oats, and then with rye, clover and plaster, when it took its course in the regular rotation.

Now mark the result of this system of cultivation. The crops of corn on these poor hills, have for several years yast, averaged about forty bushels to the acre, while this year's crop, on a field of 130 acres, is pronounced by competent judges, to be the best in the county, on either bottom or upland. The entire field, it is supposed, will average upwards of 40 bushels to the acre, while many contiguous acres can be found which will yield at least 60 bushels.[†] I have heard some of the most intelligent neighbors express the opinion, that it was the best field of corn they ever saw. The crops of wheat succeeding corn, though improving every year with the progressive improvement of the land, have never been heavy. The average may probably be set down at from eight to fifteen bushels, the crops having been of late years very materially injured by rust. Mr. Weaver's object is corn, of which immense quantities are consumed by his iron establishment. Were wheat his staple crop, he would sow it upon a clover ley.

Mr. Weaver informs me that clover did not succeed well on his new ground until it had been well cleansed by his second course of crops. It is now generally very heavy. His fields were at first much infested with sorrel, which has at length been almost entirely extirpated. Mr. Weaver regards it as all-important to the success of his clover, that it should be plastered, at the rate of half a bushel to the acre, about the time of sowing the seed. He sometimes even strews plaster on his wheat in December or January, previously to sowing his clover seed. He attributes the rapid improvement of his soil to the shelter afforded to his land by the thick growth of standing clover, as well as to the heavy coat of vegetable matter which it enables him to plow under. If clover is sown for the improvement of the soil, he regards it as a great error to graze it at all. He contends that his standing pastures, which in a few years are covered with white clover and green sward, yield him more and better pasturage for his cattle than his clover fields would afford. Consequently, he never plows them up.

No lime has ever been applied to this land, nor any manure, except a few loads annually from the mule stable to the poorest spots. The improvement has been effected exclusively by the use of clover and plaster. The land, as steep as it is, does not wash; a result which Mr. Weaver attributes to his deep plowing, and to the large quantity of long vegetable matter the soil contains, which binds it together, and at the same time keeps it loose and porous, enabling it to absorb and retain a large quantity of water.

Mr. Weaver lays great stress on applying plaster to his clover fields, either in the winter, or very early in the spring, that it may be thoroughly dissolved by the early rains. He attributes much of the benefit he has derived from the use of plaster to his practice in this respect, in which he says he is sustained by Prof. Liebig. Plaster, it is well known, absorbs a large quantity of water, and does not operate on growing plants until it is dissolved.

Mr. Weaver's mode of cultivating corn is as follows: In the month of December he sows one bushel of plaster per acre upon his clover field designed the next year for corn. He prefers this mode to plastering his corn in the hill, as more beneficial to the corn and to the land. About the 1st of March, and not earlier, for Mr. Weaver prefers spring to winter plowing, (being more recent, it leaves his land looser and in better order for a crop,) he commences breaking up his corn ground, as deeply as possible, with McCormick plows, drawn by two stout and fat mules, running around his hills, so as to throw all the furrows down hill. About the 1st of April he lays off his ground in rows, in the same direction, 4½ feet apart, and drills his corn very thick, as he never replants. His usual allowance is a bushel of seed to five acres. With this quantity of seed he has never failed, notwithstanding the depredations of the grub worm, &c. in obtaining an abundant stand of plants. He commences plowing his corn with the ordinary shovel plow, as soon as he has finished planting, by which time his first planting is generally well up. He plows and hoes twice, thinning at the first hoeing to the distance of about 2½ feet in the row, leaving from two to three plants at a station. This is all the work his corn ever gets, and he always lays it by before harvest. He endeavors to finish working his corn as early as practicable, in order to injure the roots as little as possible. With this cultivation, his corn field, under his system of improvement, is kept throughout the season both clean and loose—the great points in the management of the corn crop.

This year, Mr. Weaver has 200 acres in corn. He commenced plowing the 1st of March, with six McCormick plows, drawn by two stout mules each; and, with the assistance of his overseer and six additional hands, he finished planting the whole 200 acres by the 7th of May, having in the meantime, with the same force, bro-up and seeded 90 acres of oats. Since planting, the whole 200 acres of corn have been cultivated by twelve hands, six plowmen, and six hoe hands, and six mules, and was laid by at harvest, about the 1st of July. Seventy acres of the corn, on the home farm, were plowed and hoed only once, the corn having been previously harrowed in the row with heavy two horse harrows. This field, which was a clover ley, will probably yield about 40 bushels to the acre. Mr. Weaver confidently estimates his entire crop of corn this year, at not less than eight thousand bushels. His 90 acres of oats were supposed to average between 40 and 50 bushels to the acre—making, with his corn, an aggregate crop of twelve thousand bushels of grain, as the product of the labor of thirteen hands, with the above mentioned team, for the brief period of four months. This is what I would call very energetic and successful farming. Is it excelled, or even equaled, by any other farmer in the United States, under any thing like similar circumstances?

Mr. Weaver has a field of 40 acres on his home farm, which he cultivates for two successive years in wheat, and two in clover for hay and seed. His first wheat crop, on the clover ley, has averaged, by actual measurement, thirty-six bushels to the acre, weighing 60 lbs. to the bushel. The second crop is never as heavy as the first. He has frequently made two hundred barrels of flour from his wheat crop on these forty acres—being an average of twenty-five bushels of wheat to the acre. Mr. Weaver does not object to taking several successive crops of corn or wheat from the same land, *provided it is rich.* He contends that it is necessary to take two successive crops of wheat from his clover field, in order to cleanse and pulverize it sufficiently to secure a good stand of clover. It should be stated that considerable quantities of manure from Mr. Weaver's barn and stables are applied to this field, on the young clover. Mr. Weaver uses all his manure as a top dressing to his grass lands and clover lots. He disapproves the practice of plowing under manure.

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[*] This article originally appeared in the *Farmers' Register* of September last. An amended copy has been sent us, with a request that it might "be published in the Cultivator, to show our Yankee friends that there are some good farmers in the South,"—a request with which we cheerfully comply.

[†] Since the preceding article was written, Mr. Weaver has ascertained, by actual measurement, the product of three several acres, in different parts of the field.

No. 1, on the south side of the field, adjoining wood land, by which the corn was shaded and considerably injured, yielded *fifty-two* bushels and a fraction to the acre.

No. 2, on the extreme northern side of the field, also overshadowed and injured by timber, yielded *sixty-three* bushels and a fraction to the acre.

No. 3, on the highest point of the field on a direct line from from Nos. 1 and 2, yielded *seventy-one* bushels and a fraction to the acre. When I say 'bushels,' I mean of course, bushels of *shelled corn*, not of ears. The corn, in each lot, weighed 56 lbs. to the bushel.

The acres measured, were not the best in the field, but about a fair average, as Mr. Weaver supposes, of 100 acres of the corn—the remaining 30 acres being considerably inferior. Mr. Weaver is perfectly confident that the entire field of 130 acres will average at least fifty bushels to the acre.

I will only add that the land and corn were both measured with all possible accuracy, under Mr. Weaver's personal superintendence. Why cannot every farmer in Rockbridge, go and do likewise?

Mr. Weaver's standing pastures are the finest I ever saw, consisting of a most luxuriant growth of white clover and green sward. The only objection to them is, that they are too much infested with "rich weed," as it is termed, and thistles, which Mr. Weaver has not had time this year to destroy, in consequence of his unusually heavy crops, and the destruction of his iron establishment, saw mill, and a long line of fence, by the July freshet. He fattens upon them a number of bullocks, besides keeping a large dairy stock of very pretty cattle.

Mr. Weaver's stock of every kind, horses, of which he has very few, mules, cattle and hogs, are of a very fine quality, and are all kept constantly fat—the most economical and profitable mode, as Mr. Weaver contends, of keeping stock. He crushes all his corn for stock feeding in the ear, and he considers his crushing machine the most profitable upon his estate.

Rockbridge co. Va. Aug. 29, 1842. PLOUGHBOY.

IMPLEMENTS OF HUSBANDRY.—No. I.

OUR object of the New-York State Agricultural Society, is to collect and diffuse information on the most important and interesting subjects connected with agriculture. How far it has succeeded in this, must be obvious to all who have noticed its progress for the last two years. By its public meetings it draws together men from different sections of the state; by its premiums it induces them to bring what they suppose of peculiar excellence; it invites them to give a history of their successful and unsuccessful efforts. In its exhibitions, an animal that is considered excellent by one, is placed by the side of another that is deemed superior. An opportunity is offered for comparison, inquiry is excited, and thus all may judge for themselves, which, in their estimation, possesses the fairest claims to preference.

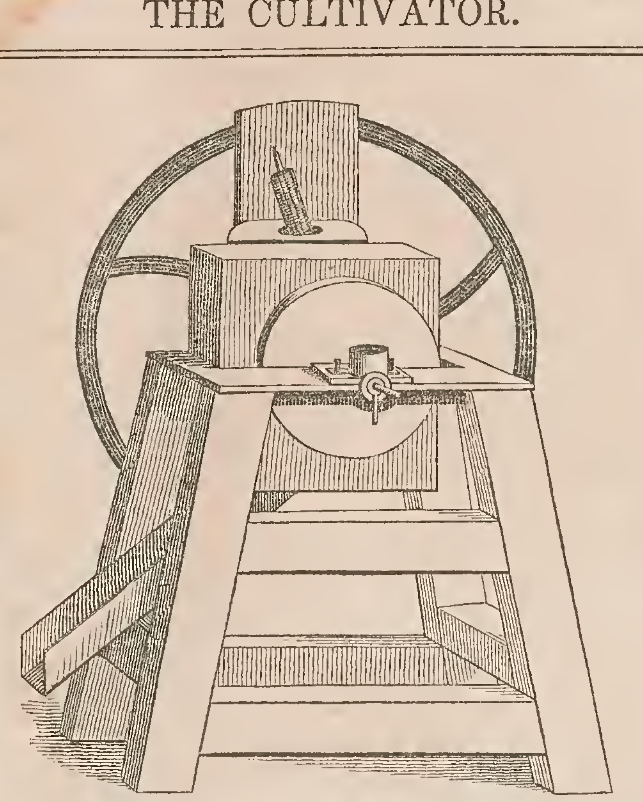
The same is true in respect to implements of husbandry. Few employments make a greater demand upon the physical powers than farming. The call, therefore, for improvements of skill are in as great demand in this as they ever will be in any other employment. In no business, however, has the head done so little, and left the hands so much to perform. The head has not, however, been slower in invention than the disposition to adopt the improvements which have been made. Before the introduction of Agricultural papers, in districts at no great remove, implements of husbandry, possessing great and distinct advantages above those in common use, were possessed, the employment of which, if not the knowledge of their existence, was confined to very limited circles. Prejudice may have been among the causes; ignorance that better were in use, however, was the most general.

Among the recent improvements of the day, in agricultural machinery, may be classed the corn and cob crusher, worked by hand or other power. Heretofore it was necessary to carry our corn to mill, which in many sections of the country was several miles distant, and besides paying toll, nine times out of ten the grist would have to be left, and another jaunt be made for it; which taking into account the toll, and time spent with a team in conveying it to and from the mill, I am not much surprised that the practice of grinding corn in the ear, has not been more generally adopted. To economise and lighten labor is an object worthy the attention of every farmer.

As to the value of corn and cob ground together for feed for animals, it is conceded, I believe, by all who have given it a fair trial. From the many evidences of the nutriment contained in the corn cob, the one made a few years ago by Mr. Minor, of Virginia, is decisive. On distillation of five bushels of cob meal, Mr. M. procured four gallons of spirit. He also found other nutritive matter than the saccharine which is converted into alcohol, as mucilage and oils.

"But besides the actual economy," says Mr. Minor, in the American Farmer, who had several years experience, "there is another advantage in this way of feeding corn, which ought to engage the attention of every farmer. It is notoriously true, that the unground grain of corn, is heating to the stomach of all animals, and of difficult digestion, producing cholic, and other inflammatory disorders, particularly in horses. They are deprived of the benefits derived from the stimulus of distension, (so necessary to the proper health of all animals,) by being unable to eat a sufficient bulk to produce it before they become gorged." For hogs, corn and cob meal is much improved by scalding; and by boiling with vegetables of any kind, and yet more by a partial fermentation.

With the machines I am about to describe, we have the means of crushing and grinding corn and cob on our own premises, either with hand, horse or water power. And first in order, will be the one exhibited at our Fair in Sept. last, by Mr. Obed Hussey, of Baltimore, Md., to which was awarded the Society's first premium.



(*Hussey's Corn and Cob Crusher.—Fig.* 9.)

This machine, of which fig. 9 is a pictorial representation, occupies about 3 feet square on the floor, and weighs about 275 lbs. and is calculated for horse or water power. The band pully is 15 inches in diameter, a size intended to reduce the motion sufficiently, when put in place of the thresher and driver by the same band, and to do quick work will require about 400 revolutions per minute; but less will answer. "It is capable of reducing," says Mr. Hussey, "with two to four horses, from six to ten bushels of corn and cob per hour, and it has ground six bushels per hour with one horse, but he was a strong and powerful animal." The corn is fed into a tube, one ear at a time, with the hand, the feeding graduated by the driving power, as it will take feed according to the power applied. The grinders are made of cast iron, the cob cutters of steel, and when worn out can be replaced for a trifling expense, say one dollar and fifty cents per pair; and can be taken off, put on, and adjusted by any mechanic of ordinary ingenuity. The whole is substantially made, apparently of good materials, and put together in a workmanlike manner. The price, in Baltimore, including an extra set of grinders, is $35.

I have one of the abovementioned mills now in operation on my premises, worked by a small over-shot water wheel, 6 feet in diameter, buckets 18 inches long, receiving a very small column of water, say six inches square, with one foot head, and giving the mill only about 250 revolutions per minute. With this feeble power, I have ground 3 bushels of corn and cob per hour. After mixing the cob meal with oats, and setting the mill finer, I have run through it six bushels within the hour, and when mixed with wheat screenings, at the rate of 8 bushels per hour, reducing it as fine as shorts. It grinds oats better than any mill I have ever tried, and they have not been few. If a hopper was attached, so that the feeding could be graduated, all kinds of grain, for feeding, may be ground with ease; and so far as my experience has gone, I can safely and confidently recommend it, as being a very useful and efficient machine for the purposes intended.

Next in order, is "Baldwin's cob and corn crusher,"* which was exhibited by Mr. Sinclair, of Baltimore, and took the Society's second premium.

This machine has been in use for several years, and if I were to judge from the appearance of the mill, and the testimony of those who have it in use, I should pronounce it a very powerful and efficient machine, and not very liable to be put out of order, and to last one's life time. The principle is entirely different from that of Mr. Hussey; one being a *grinder*, the other a *crusher*. It occupies more space, say 3 by 4 feet on the floor, and weighs about 800 lbs. The operating part is of cast iron, and very substantial. There are three series of fluted rollers; the first set, coarsely fluted, which pinches off the ear as it is fed through a small hole in the top, one ear at a time, and the pieces drop into the second set, which are still finer, and then fall into the third, which reduces it as fine as coarse hommony.

A correspondent in the American Farmer, over the signature of "A. H. T." referring to this machine, says: "Previous to the purchase of the crusher, we averaged the daily consumption of 214 ears of corn per day. Our stock then and now, number seven head. One hundred and sixty ears of the ordinary size are now run through the crusher; they make 2½ heaping bushels of crushed corn and cob. The different appearance of the horses, and their ability to work, prove beyond a doubt, that the crusher affords a more nutritious and healthy food. It will be seen it also places to our credit, 54 ears of corn per day, which would amount to upwards of 30 barrels a year, worth at the average Baltimore prices, nearly double the cost of the crusher. With four men to turn, and a boy to feed, from 4 to 5 bushels per hour can be crushed. To work the machine effectually and economically, it must have velocity, which cannot be readily effected by manual power. With a two horse power, 13 bushels of corn and cob can be crushed in one hour. The crusher in question, came from the manufactory of Messrs. R. Sinclair Jr. & Co. Baltimore. During the two years we have had it in use, and quite roughly, it has not cost us one cent for repairs, and is now in as good order as when purchased." This, to say the least, is high praise in its favor, and from a careful inspection of the mill, I should think it true, and goes far to recommend it, and is what may be called *practical proof,* the best kind of proof.

The mill exhibited at the State Fair, in Sept. last, is now on sale, at the store of Wm. Thorburn, Esq. Broadway, Albany. Price $85. C. N. BEMENT.

Three Hills Farm, Dec. 1842.

THE BASKET WILLOW.

MESSRS. GAYLORD & TUCKER—At this period of low prices for agricultural products, it becomes the duty of every patriotic citizen, to point out all new articles for culture, that can afford profit to our farmers; more particularly such as will lessen the amount of foreign importations, our purchases having exceeded our sales five hundred millions of dollars in thirty years.

Of all the imports into our country, I have been more surprised to see that of the basket willow in large quantities than of all others. In every state I have traveled over in this country, I have seen thousands of acres of land now lying useless, that might be made highly profitable to their owners, by planting the willow. Fresh water swampy land, useless for common agricultural purposes, is the best for planting the willow. The basket willow is a light bulky article, and I have no doubt our farmers could raise them, take off their bark, and send them to market at a fair profit, for the usual cost of transit and other expenses incidental to the importation. Yet with such decided advantages in our favor, tens of thousands of bundles are imported into this country every year from Holland.

I have some practical knowledge on this subject, which I send you, in hopes that some of our enterprising farmers will attend to it, and raise the article for home consumption. Our basket makers inform me, that American willows are sometimes offered for sale, but that they are a brashy article, and of course very inferior to the tough foreign willow.

I was brought up to the dyeing business in England, in which eight of our copper kettles were appropriated to piece dyeing, five of them to delicate colors, requiring baskets inside to defend the goods from contracting stains, by coming in contact with the metal. To make the baskets, we raised two acres of willows, and we considered the profit equal to forty pounds per acre, after paying all expenses of cultivation, and of stripping off the bark. These willow beds were planted in fresh water swampy land, by throwing the soil into ridges, and planting cuts of willows about two feet apart. Our bed was old when I was young, and is now as productive as ever. Now and then, old stumps had to be taken up, and fresh cuts planted in their place. As we required large willows for our baskets, excepting for a part of the filling in, we cut them every two years; whereas, for common domestic baskets, they are cut every year. After a new bed is planted, the product will be light the first year; increasing in number annually, as the stumps grow larger. They should be cut in the spring when the sap is running, tied in convenient bundles, with one of the smaller willows, and the butt ends put into a mud hole containing water, to prevent the bark tightening before it is convenient to peel them. When we planted new ones, we merely cut off about two feet in length from the butt ends of the largest willows, and thrust them into the ridges where required, to about two-thirds of their length, leaving one-third above the ground for bearing.

As I mentioned before, the willows when cut, were made into bundles and placed in a mud hole, to keep the bark loose until they were peeled. I will now describe the process of peeling, which may be performed by any boy or girl of ten years old. The peeling machine was very simple. It consisted of two pieces of sound tough wood, opening about one inch at the top, and coming nearly close together at the bottom; inside of each piece was inserted a small round piece of iron, leaving half its diameter projecting from the wood, and the whole was about two feet in length, the irons coming close together at the bottom. This machine was firmly fixed in the end of a strong wooden bench, very much like that used by shoemakers, standing perpendicular from it. When worked, a bundle of willows, washed from the mud, were placed parallel with the bench; the operator sitting across it, drew the willows through the machine, letting it sink to where the irons grasped the bark. In many instances, once drawing through would strip the bark, if not, the willow was turned and drawn through where the bark still adhered. All the children I ever knew, were fond of this work, and it was quite a frolic for half a dozen boys, on as many benches, striving who could strip the greatest number in a given time.

Any farmer desirous of cultivating the willow, must make sure that he obtains the right species, as his future success will entirely depend on this circumstance. There is a great variety of the willow, and but few sufficiently tough for the basket maker. To prevent mistake in the commencement, it would be well to obtain cuttings from Holland, through the agency of the American consul. In a few years, these may be increased to produce an adequate supply for our demand. I have been informed that a German basket maker, residing, if my memory serves me, near Boston, raises his own willows, and has made money by the operation. WM. PARTRIDGE.

New-York, Dec. 6, 1842.

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* An engraving of this was given at p. 56, vol. VIII, of the Cultivator.

MERINO AND SAXONY SHEEP.

Messrs. Gaylord & Tucker—In your Sept. No. is a communication from Mr. Sotham, headed Sheep Husbandry, in which he asks *whether the Merino and Saxony are distinct breeds.* Thinking I could point the way, if not give you direct information on a subject of no trifling importance, I send the recollections of my readings on the Merino controversy in England, in the attempt to establish them as a profitable breed for the rich pastures of the United Kingdoms, which the present limited number now kept, proves to have been a fallacious idea. Mutton and wool united, *there*, and will *here*, carry the palm of merit, *over wool alone.* The question will be between the South Down and the Merino, not between the Merino and Leicester.

I do not recollect the date when the then Elector of Saxony received from Spain,—although a law then existed making it death to export or transport a pure merino sheep from that country,—a number of sheep, and so well satisfied was he of their superior merits, that he obliged every vassal of the state, to receive (as the merinos increased,) a proportion of those sheep in preference to any other stock themselves might think it right to keep. He then established a board of scientific and practical men, and three times in each year, a regular examination of all the lambs of that year took place, by every individual lamb being placed upon a table, when symmetry of form and fineness of wool, was the passport to forming a part of the royal flock. With so rigid a scrutiny, will Mr. Sotham be surprised, that the Saxon Merino carries with it the superiority thought by him to indicate a distinct breed? There are three distinct breeds or races of Spanish Merinos, and little doubt can be made but so enthusiastic an amateur as the then Elector, procured from his Spanish Majesty the best of the three.

James Jones.

St. Davids, Canada West, Oct. 15, 1842.

AGRICULTURAL IMPLEMENTS, &c.

Editors of the Cultivator—Will you not through your columns, say to the venders of "Warren's Horse Power and Threshing Machine," that if they would furnish to the readers of the Cultivator, such a description of their horse power and machine, as to enable us to form an opinion respecting its capabilities, they would probably advance their own interest as well as gratify the public. So extensive is the circulation of the Cultivator, that but comparatively a small portion of its readers can have an opportunity to examine an article which is manufactured in but one or two places in the Union, and as in modern times it is not always safe to purchase a thing because it is highly recommended, many decline to order from a distance a really useful article, solely from the fear of being imposed upon. I doubt not but that those who have furnished for the Cultivator, well executed drawings and descriptions of the various implements therein described, have consulted their interest in so doing. Those who have only seen a four or six horse power threshing machine, (the only kind used in this vicinity,) and witnessed the inefficiency of the machine when impelled by too light a team, may well be surprised at the statements made by the venders of single horse machines. I always supposed that spiked cylinder machines required about 900 revolutions per minute, to do good work. Now in these single horse machines, is this rate of motion communicated to a shorter cylinder, or is the thresher constructed upon a different principle, so as to require less power and motion? I am led to make the above remarks and inquiries, by observing that one of your correspondents cautions farmers against purchasing any thing less than a 4 or 6 horse power machine.

Corn Stalk Sugar.—I tried this year, an experiment in raising fodder by sowing corn broadcast; and although my ground was as fertile as river alluvion, and the seed put in in the best manner, the crop has fallen far short of my expectations. From a portion of the stalks raised as above, I tried an experiment on a small scale, to ascertain the practicability of making sugar therefrom. The result of this experiment has led me to the following conclusions:

1st. That Mr. Webb's statement of the amount of sugar which can be made from an acre is not overrated.

2d. That stripping the ears from the stalks is essential to the production of sugar, though not essential to the production of a much smaller quantity of excellent molasses.

3d. That large stalks yield much more juice than small ones, in proportion to their size, and that consequently, the corn should be grown in drills, and not by sowing broadcast.

4th. That the principal labor in making sugar from corn stalks, consists in stripping off the leaves, and that this is most expeditiously accomplished before the stalks are cut.

5th. That three quarts of juice will yield saccharine matter equal to one pound of sugar; or that eight gallons of juice will make one gallon of thick molasses.

6th. That the manufacture of sugar from corn stalks is an object well worthy the attention of every family who has even one acre of ground to cultivate.

Chinese Tree Corn.—Permit me to add a few words respecting the much talked of Chinese Corn. I think I can account for some of the contradictory statements respecting it, and particularly, Messrs. Editors, for its metamorphosis under your cultivation. I have raised the corn for the last two seasons, and have been acquainted with its growth in this vicinity ever since its first introduction to public notice by Mr. Thorburn; and I cannot perceive that it has, as yet, any tendency to degenerate. Compared with the corn ordinarily grown in the N. E. states, its growth is monstrous, and its time of ripening late: but compared with the tall gourd seed corn raised south of latitude 41°, in the western states, it is rather dwarfish, and not late. Many failures, I have no doubt, (and I think yours among the rest,) have proceeded from close planting; for I feel confident that if this, or indeed any southern or western corn is cultivated after Dr. Physick's mode, a great crop of stalks and leaves will be the only result. Less than 4½ feet asunder each way, and more than 3 kernels suffered to grow in the hill, will not answer for this corn. Planted in this way, my Chinese corn this year, has done all that I could ask of it, producing far more corn, and more than double the fodder, that I could get from any other kind upon the same ground. 110 days, I consider necessary to perfect the crop in this climate, and mine has ripened in that time the past season, although there has not been a month free from frost since Aug. 1841. My location is in 41° 20 N. lat. and 6° 30 W. from Washington.

In addition to our monthly frosts, I will mention as another peculiarity of the past season, the fact that in this vicinity, as far as I can learn, no bees have swarmed. I had one strong swarm in a hive somewhat similar to Week's Vermont hive, with a pane of glass in the lower part of it. In this hive, the first young bees were discovered about the last of July. Can Mr. Weeks, or any one else account for this? That it may not be supposed that this was an accidental circumstance with me, I will state my observations have extended to probably a thousand swarms, in all sorts of hives, the Vermont hive among the rest. W. R. P.

Bowling Green, Wood co. O. Oct. 22, 1842.

CULTURE OF COTTON.

Messrs. Editors—In the Oct. No. of the Cultivator, I noticed in P. S. under the signature of N. B. Cloud, M. D., that if he was not greatly deceived in some experiments he was making, he would astonish some of your subscribers in the cotton region, toward the winding up of the present crop, in regard to an entire new and improved mode of culture, by which he proposes to curtail the expense of producing this great national staple to one-third its present enormity.

I am one so credulous, that I am disposed to believe almost any thing that promises good, but still I cannot venture farther than to say I feebly hope he may succeed in all that he has said, and if he does, he will be the greatest benefactor of his race.

The great Fulton failed to reduce the expense of transportation two-thirds, but the improvements of others added to his, fully accomplished that object; and if Dr. Cloud, aided by 100 co-workers, should succeed in reducing the expense of raising cotton even one-third, his name, with the 100, should be enrolled among the greatest benefactors; but I will wait to see his promised version of the whole matter, hoping he will strengthen my feeble hope into confidence of his success. I must say that I am sorry he has promised so much, for I feel somewhat forestalled in a like undertaking; an experiment that I have had on hand for 3 years, and yet it will take 2 years more before I can announce the full result of the experiment; yet so far as I have advanced, I will give the result.

Two years since, I found in my crop, a stalk uncommonly loaded with balls, and what is uncommon, the balls were something larger than common. I saved and planted it by itself. Only about half of the next crop was like the mother stalk. I again selected from the best stalks, which I planted last spring, showing it no special favor, either in cultivation or the land on which it was planted, excepting that I gave it about 3 feet distance in the drill, which is nearly double the common distance, the drills being 4 feet apart, (common distance.) My motive for giving such distance, (although my land is quite common,) is that I knew distance is favorable to cotton bearing well; having in view for the present, the improvement of my cotton more than the quantity to be raised off a small piece of land; but I was somewhat surprised to find that my improved cotton yielded 1,403 lbs. per acre, against 1,040 lbs. per acre of seed cotton, from the balance of my crop. I have again selected from the best stalks to carry forward the improvement, and I propose to give you an annual account of my progress, provided I am not eclipsed by some more brilliant results. If I find that 3 feet in the drill is the best distance in common land, it will be about one-tenth easier to cultivate; and as I find the balls to be one sixth larger than common, I think it can be saved one-tenth faster; and to facilitate saving of cotton in Mississippi, is almost as great an object as to increase the yield.

The country is sickened with humbugs; and I am proud to see such spirits as N. B. Cloud, rise in aid to put them down. Down with them, and let the future be an age distinguished for generous emulation, and let him that can confer the greatest amount of benefit with the least pay, be counted worthy of all honor.

The present crop of cotton, in this and the adjoining states, as far as I have heard from, is undoubtedly better than common, and the forebodings about price never were so gloomy since my recollection, but even if it should fall one or two cents lower than its present low price, I do not think it will be any injury to the cotton planter that is out of debt; for a failure in the East India cotton will certainly follow, and then the cotton planter, with an improved system of economy, will reap his reward.

Respectfully yours,

Noxubce co. Miss. Nov. 21, 1842. M. T. M'Gehee.

IRISH AND "SCRUB" CATTLE.

Messrs. Gaylord & Tucker—Commentator may feel *perfectly at ease. He has not incurred my wrath,* but I did not expect *censure* from him until he had sufficient grounds for it. At all events, it was little but *declamation,* without amounting to much. *I yield to nothing but proof.*

I said Mr. Randall might breed from the "*scrub stock,*" or *common* breed of the country, without success, and I truly believe it. I may be wrong, but this is my opinion if he confines himself to the "common," which I say are the commonest breed of Irish cattle, called Middle Horns, although they possess larger paunches, more ragged hips and chines, than the Irish breed of cattle generally do, which I think is a very serious evil. But this I attribute to *careless breeding* and treatment.

I have seen droves out of number, brought into Liverpool, where the neighboring *third class* graziers and jobbers meet them, select the *best handlers,* and leave the inferior ones to travel farther, to be sold at a much cheaper rate. They are driven from fair to fair with a heavy tax on the drover's purse and patience, until he meets with a "*green*" grazier or jobber to release him, and the fag end are sold at a very low price, without *much* profit the seller or purchaser.

There are evidently two breeds, the Long Horns and Middle Horns. Tradition tells us the former are the origin of the English Long Horns, and I have no reason to dispute it; they are far better grazers than the middle horns, but not as good milkers, and so they have proved in this country as regards quantity.

Reason seems to tell me that the earliest settlers could procure this breed, at the seaport towns, at the least expense and trouble, *without reference to the best of the drove,* and at that day the superiority of breed was but little thought of. This is the kind of cattle I call "*scrub stock, common, or native.*" I do not class a mixture of the Hereford, Short Horn, Devon, Ayrshires, &c. with this stock. A cross with the short horns, would be the *identical* cattle Mr. Randall would breed, according to his *own doctrine,* and if he still grounds his faith on "Youatt," he will find that this breed has been crossed with the short horns "without success."

I again refer Messrs. Randall and Commentator, to their *favorite* author, for the early improvement of the Long Horns, or "Mr. Bakewell's *breed,*" which I should have dwelt upon at some length, had not the able communication from Mr. Howard superceded me, and to which I will add another quotation from "Youatt," but I do not *quote it* as gospel. "In the districts where the experiments (on the Long Horns,) were carried on, it established a breed of cattle, equaled by few, and excelled by none but the Herefords." You will find this, page 197.

Hereford Hall, near Albany. W. H. Sotham.

THE WILD TURKEY.

Messrs. Gaylord & Tucker—In your replies to an "Enquirer," in relation to Poultry, in a late Cultivator, you say, "We are not aware that the Wild Turkey has ever been crossed with the domestic one, or that a successful attempt has been made to domesticate them. Such attempts appear to be scorned equally by the Wild Turkey and the Partridge."

I am sure you will excuse me for reminding you that the wild turkey and the domestic turkey, are identically the same animal, the *habits* of the bird alone having been modified by domestication. Very few people know that this is peculiarly an *American bird;* that the wild turkey was caught in our forests, and carried to Europe in 1610, I believe, and thence sprung the whole brood of domestic turkeys of Europe; and that was at least one instance of a successful attempt to domesticate it. As to crossing, Mr. Audubon, in his splendid work, the "Birds of America," says, "Wild Turkeys often approach and associate with tame ones, or fight with them and drive them off from their food. The cocks sometimes pay their addresses to the domesticated females, and are generally received by them with great pleasure, as well as by their owners, who are well aware of the advantages resulting from such intrusions, the half breed being much more hardy than the tame, and consequently more easily reared." When a wild turkey has been kept three or four years, it often changes color more or less, white feathers appear, &c. The effects of domesticating this bird, are a variety of color, and more delicacy of constitution. The domestic turkey has often been known to stray off, and assume all the habits of the wild one, and in the course of two or three generations their color even assumes the fixed characters of the wild bird. So far as known, there are no varieties of the turkey; color being the only difference between any of them. It is said to require several generations to fix the habits of the bird by domestication, and these habits he is always liable to lose. Your readers, I am sure, would be much pleased with an opportunity to read the chapter on this most valuable of birds, contained in Mr. Audubon's admirable work above referred to. G. B. S.

BERMUDA GRASS.

Editors of the Cultivator—In your August No. inquiry is made, by a correspondent in Georgia, how to destroy Bermuda grass. The succeeding number not containing an answer, and if none other be received for your next number, the following mode may be suggested as having been successful in Alabama:—Begin in the spring, at the first appearance of green leaves, or at a later period in the spring months may answer, with sharp weeding hoes to cut off the grass on a level with the surface of the ground; (which cut grass should be removed and burned,) and then not fail thereafter to cut off a little below the surface, the sprouts or leaves, *as often* and *so soon* as they appear above ground, even if it be thrice a month in wet weather or spring season. In dry weather, and at a later period, the sprouts or leaves will not put forth so often. The philosophy of the case is this, that to form healthy roots, the sap must be elaborated by a chemical action of sun, air, and absorption of gases in the leaves; but if deprived of the leaves, the sap ferments, putrifies and destroys the roots. The same will apply to the Canada thistle, elders, or any other vegetation whatsoever, though one kind of vegetation may require the budding leaves to be removed from the limbs, stalks, or stems, more often than another to effect the same object. Bermuda grass forms a firm sod, excludes weeds, thrives on ordinary sandy as well as other ground, and keeps green through drouthy summers; qualities which no other grasses at the south possess. It is appreciated for affording to poultry the supply of green food that they need, for grass plats, and embellishments of door yards. In time it may spread to gardens and fields, not from seeds, as they do not mature in frosty climates, but from the stalk running along the ground, taking root and putting up stems with leaves at the joints, which are an inch or two apart. Your correspondent is not likely to be informed of any plan to free his fields of this grass, by means of sowing seeds of grasses less injurious to crops, nor by grazing, nor by plowing, which he mentions as the mode he should prefer to destroy it.

Respectfully, John J. Crocheron.

Richmond Co. N. Y. Sept. 16, 1842.

THE VINE, SILK CULTURE, &c.

Messrs. Editors.—As yours is a periodical of very general circulation throughout republican America, and therefore a common receptacle of agricultural intelligence of all sorts, and from all places, I offer you a few passing remarks on the above topics. And permit me to say, as introductory thereto, that if wine and silk be important branches of agriculture, or the art of arts, as it regards useful and honorable employment, and the lessening of annual millions of foreign dependence and indebtedness for such articles; that North Carolina, or our section of the Union, is destined by soil and climate, to become conspicuous in these matters. Indeed our state I see ranks highest as to wine, in the result of the late agricultural products of the Union.

I proceed to state my success the past season in wine making, or the increase of the products of my vineyards. Notwithstanding the injury occasioned by two severe protracted storms, or so called *gusts* in this region, last year, without material interruption of common farming operations, I made about eight barrels of wine, (a part of which I have already sold at the rate of two dollars per gallon;) this year, near twelve, besides selling grapes at my vineyards, and wine juice from the press to some amount. I consider I lost several barrels by the gusts. I calculate on at least a dozen and a half barrels next season; and an intelligent visitor to my establishment, esteemed a judge in such matters, declared his opinion that in a few years, by continuing my American process of vine culture, I would probably make fifty barrels of wine annually, on a few, or four or five acres.

A few years since, it was thought by some, I would fail of eventual profit from my vineyards, on account of gratuitous visitations to see and partake of grapes. For besides invited, many uninvited guests called upon me in grape time. But to protect myself, as well as the cause, I advertised 25 cents individual entrance into the vineyards, and 50 cents per gallon, for all grapes called for and taken away. And since, while a few illiberal people censure this necessary measure, as a novelty here in the fruit line, the truly honorable and liberal minded sustain and visit me more freely and frequently than ever.

It is conceded by all acquainted with the fact, that I am indebted for entire success in the vineyard business, to the circumstance of abandoning any *European* or *foreign*, and adhering closely to my "*American System*," as to *kinds* of (native) grapes, modes of culture, and process of wine making. Among native grapes, Weller's Halifax, and Norton's Virginia Seedling, rank highest in the vineyards around here; and in those near Richmond, Va. and adjoining regions; except, perhaps, the Scuppernong, a native of the lower part of this state. But the peculiar excellency of this last, I learn, is confined to latitudes south of 37. My Halifax seems adapted to all (at least American) climes, or wherever tried: for instance in Orange county, N. Y. my native place, where my friends inform me it is cultivated with entire satisfaction and success. Such is the estimation of my native vines, (some dozen kinds of peculiar excellence,) that of a pretty extensive stock in market of well rooted ones, (cuttings as of so comparative slow and uncertain issue, I give away to liberal patrons,) I expect, from the experience of past years, to have none left by the time spring opens here. I have applications now, from various states of the Union.

Silk Operations at Brinkleyville, N. C.—As to silk operations the past season, my earliest crops did very well; but not so, (as heretofore,) the late fed worms. Indeed, from several years experience, and from that of others, as far as I have learned from periodicals and other sources, I am constrained to say I am disposed to abandon late feeding, as too precarious in the result for expected profit. Even lime has not proved a sufficient antidote to the diseases of late fed worms, so far as I have tried. Nor even the fresh successive growth of multicaulis leaves, either after stripping the branches, or after the cutting down and new growth of the trees. Though such is the peculiar excellency of this kind of mulberry for silk, as to rapidity and succession of growth, (the slow growth and old tough leaves of other kinds out of the question, I think, as to late feeding with success,) that connected with lime, and Mr. G. B. Smith's new theory of hatching, and more certainty as to successful keeping back eggs in the ice houses, that if ever late crops be an object, or of general and successful practice, it must become so from that source. I give credence to the statements that some few late crops have been successful with peculiar care and under peculiar circumstances. But the idea that it is an object, from present light and experience, to attempt such crops for profit, I am thoroughly convinced is calculated to produce a discouraging reaction to the silk cause, now progressing in various parts of our country with all reasonable hopes of general success. But such success, I apprehend, must be had on like principles with that at and around Mansfield, Conn. for near a century past. And I will briefly give the process there, as detailed to me by a young lady from that place, to whom I gave a hundred dollars, for coming a month or two in my family, to teach us the silk art, by example and precept. Miss Dunham said her mother before her, had been brought up to the business, and that the outline of their procedure there was this:—1st. To keep their eggs cool, or say between folds of linen cloth, till spring, when they hatched as the mulberry leaves unfolded. 2d. To make as great a crop as they could, by turning their kitchens and out houses into silk worm receptacles; and to exchange work with people in the adjoining country, to be returned when the silk crop was secured, particularly female labor or that of the cheapest kind. Various other details she related, too tedious for our prescribed limits; yet one or two more, I will name, as, 1st, to secure a healthy crop, they always used eggs from the most healthy worms, even if they bought from one another. And 2dly, they turned most of their crops into sewing silk, by a process on common wheels. I observe here, that agreeably to her example and instructions, these 3 years past, we have been making first rate sewing silk, that commands a good and ready market. That at this time we are making a quantity to supply an order from a store near us, at rates of 4 cts. per skein, or more than $10 per lb. And that I have sent sample or skeins to those I esteemed the best judges, in various parts of our country, that were pronounced good and well colored, according to a very simple process of coloring a blue black. For instance, to Mr. Morris Pollock, a great silk man from Scotland, lately settled in Virginia; and to Mr. Polhemus, agent at Auburn Penitentiary, from whom I received in return, some beautiful samples of sewing silk there manufactured. The Mansfield plan of little expense for buildings and labor, is doubtless most prudent in most cases. But as to myself, after careful examination of various plans and fixtures North and South, I erected a silk house combining various advantages besides those for the primary object. I erected it on upright timbers or posts, placed on rocks or large stones, and the building proper standing 10 feet above ground level; and so fixed as to be rat, mouse, and ant proof, or free from danger of these three common annoyances. Then in rainy weather, to quickly dry leaves or multicaulus branches, we hang them up under the silk house, to enjoy the free circulation of air. By a furnace underneath, and square box leaders on the edges of the rooms above, I can heat as I choose in cold or damp weather, (a thing desirable, but not indispensable.) The fixtures above, are somewhat on the plan of Mr. E. Morris' silk frames, connected with an invention of my own and another's, on the inclined plane or self-cleansing and spinning plan; which fixtures can at any time be taken down and stowed away, and then my rooms are first rate as a granary, and for various farming operations. And underneath I find very convenient for weather protection of my vehicles, farming tools, and the like.

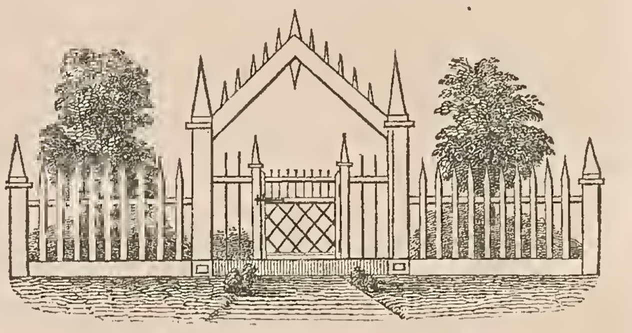
Fearing to become too prolix, I close for the present; but intend shortly to send you an account of the continued experiments of myself and others, in making clover a certain crop even in southern climes, and doubling the product of wheat therewith, by a thin surface covering of pine leaves, or straw, or other litter. Also of the renewed success of double and triple crops. Likewise trials of sowing small grain without covering with earth, or otherwise than with straw or the like, according to the new theory of nature's process in the vegetable world. And also some remarks as to the peculiarity of agricultural labor employed in the South.

Yours, &c. Sidney Weller.

Brinkleyville, Halifax co. N. C. Nov. 1842.

SOUR SOILS.

Messrs. Editors—It has often occurred to me, in reading, or in conversation, when the word *sour soils, acid soils,* &c. have been used, that it was a misapplication of terms, similar to that in very common use in relation to cold and heat. For example, it is a common saying that if you put frozen potatoes into cold water, you will thus *draw the frost out* of them. Cold being the mere absence of heat, or the result of heat rendered latent or inactive, is of course not matter, and cannot be drawn out of any thing. The proper expression is, by putting frozen potatoes into cold water, you restore the proper degree of heat to them; and the reason why it is better to restore heat to them in that way, than by exposing them directly to the influence of fire, is, that the transition from a low to a higher temperature is thus rendered gradual and of course harmless. These remarks, however, are intended to illustrate my idea of sour soils, which is, that such soils are not indeed sour, but are merely deficient in alkali. The proof generally offered to establish the existence of acid in soils, in my opinion only proves the absence of alkali, or alkaline earths. That a soil produces sorrel, (Rumex acetosa,) surely does not prove "*per se,*" that the soil itself is sour or acid; because, if it did, we should be able to prove all soils to be sour, for there is no one that does not produce some kind of vegetable acid, and some that are known to be highly charged with alkaline earths, are very prolific of what is called sheep sorrel, a species of oxalis; almost all soils produce currants, crab apples, &c. I think, therefore, that what we call *sour soils,* merely lack the necessary alkaline principle which is necessary to the formation of almost all vegetable growths. G. B. S.



ORNAMENTAL GATE.—(Fig. 10.)

Messrs. Editors—I think it is truly said in a former No. of the Cultivator, that "there is no one thing that gives more character to a farm than a neat and handsome gate at the entrance." Yet many farmers seem contented with rough bars, the taking down and putting up of which, must add considerable to a year's work. The engraving represents a gate and fence, which we erected around our garden last spring. I do not say that it is more ornamental than some other gates, and if some of your correspondents will give a better model it will be thankfully received. The gate posts are 10 feet long, 10 inches square, and set three feet into the ground, with a bed piece between, into which the inner posts are morticed. The fence posts are 4 feet long, 10 inches square, and made of 1½ inch plank, well spiked together. A long stone is set solid in the ground, the hollow post placed over it, and the cavity between the stone and the inside of the post filled with pebbles. I know of posts set in this manner which have lasted ten years, and continue as firm as ever. Now if a person would have a pleasant and attractive home, he must have his buildings, gates, and fences, in good order; his garden well laid out and filled with choice fruits and flowers; pleasant trees around his dwelling, &c. Some may think that they shall receive no benefit from setting fruit and shade trees, but if they live by the principle of "love your neighbor as yourself," they will banish such thoughts at once. Lawrence Smith.

Middlefield, Mass. Aug. 8, 1842.

FEEDING BARLEY TO STOCK.

Editors of the Cultivator—Enclosed is my subscription for 1843, with my best wishes for increased circulation to the best agricultural paper I am acquainted with.

Has Bommer's Manure been tried sufficiently to warrant confidence in its use? It will serve the inventor more, to be able to refer to experiments by practical farmers, than all other endorsements.*

The very low price of Barley, induces me to remark to my brother farmers, that they may use it for their stock to much better profit than selling it to the brewers. I have almost invariably fattened my hogs on Barley meal. I fed one span of horses on it for some years, and I thought they did not yield to any farmer's team, for either speed or endurance. When not convenient to grind it, I soaked it in water as for malting, taking care that it did not sprout too much. I doubt not that this use of barley is well known to many, but if it should be of use to a few only, this communication will not be in vain, although a trifle. For animals giving milk, it is hurtful, occasioning the milk fever. I attribute to it the loss of a sow and her litter, some years ago. For horses one-third to one-half (in barley,) of the usual feed of oats—better still to take weight for weight.

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* We have seen several certificates from those who have tested the quality of the manure made by Mr. Bommer's process, and we annex one which we find in the last No. of the Conn. Farmers' Gazette:—[Eds. Cult.]

"I hereby certify that having made repeated trials, of Mr. George Bommer's method of making Manure by fermentation, and having tested its effects in the rapid decomposition of the mass to which it has been applied, and having also witnessed the influence of the manure made by this process in promoting the growth of vegetation, I am prepared to regard the invention as an important accession to the farming interest; and although having tried other modes of making manure with varied success, I am free to acknowledge that I have never been acquainted with any system of the kind that would compare with this for utility. Erastus Dudley.

North Guilford, Nov. 23, 1842.

"We are well acquainted with Mr. Dudley, the author of the above certificate, and we know him to be a man of sterling integrity. He is an intelligent farmer, and not likely to be imposed upon by every *new thing*. Inasmuch as he has tried Mr. Bommer's method, and gives his unqualified testimony in its favor, we have no hesitation in commending his statement to the confidence of the public."—*Farm. Gazette.*

Respectfully, John Moxon.
Charlotte, Monroe co. N. Y. Dec. 9, 1842.

BRINE YOUR HAY—OLD WHIMS.

Messrs. Gaylord and Tucker—It may be well to remind some of your readers of the advantage of salting their poor fodder, at intervals through the winter, both for cattle and sheep.

Lay by all your hay, stalks, straw, &c. that are coarse or damaged, then once or twice a week, in warm days or moderate weather, brine this refuse hay and other feed: to one pail of water add one pint of salt, sprinkle this brine on one large forkfull of dry food, and you will find that all or most of it will be consumed, though some locks may not be impregnated with salt.

Several important advantages may be gained by this treatment.

First—you will dispose of all your poor fodder; *second*—they will eat it with avidity and look full in warm faint days when tolerably good feed may lay before them rejected, or eaten with reluctance; *third*—it answers every purpose of otherwise salting the stock as they should be; *fourth*—you will not lose one half the number of animals, especially sheep, as you would to manage any other way.

Disadvantages of Agricultural Papers.—It is very common to hear the farmer say, "I will not subscribe for this or that agricultural paper, because it is published *one hundred miles* or more abroad from me, and *our* farming requires a very different process where we live from the neighborhood where the paper is issued."

Now, by these numerous objectors I would like to have some one of them answer, through your paper, why salting stock as above directed, except near the sea shore, would not be beneficial in any other state? and also inform us what difference there should be of soil in Maine or Ohio or any other state, to produce corn from that which is required in the vicinity of your paper? And whether the same manures when applied in the same manner on the same kind of soil, will not produce the same effect on the same grain in any country? What different effects would draining have in the western or southern states over the northern, when executed in the same kinds of soil, similarly located? A plow that succeeds well in one state why not in another, if the soil and sod be the same, where the same kind of work is required?

Why will not a probang or any other instrument that may be described in your paper, that will in all cases succeed in extracting a potatoe from the throat of an unfortunate animal in Wiskonsan, answer as well in the same capacity in Vermont.

I will wait on your opposers, Messrs. Editors, with patience, and not propose any more questions, if they will either truly answer the above questions or subscribe for your paper. We hear much said about hard times, but it is an encouraging thought to know that we shall not live under a cloud always.

With respect, yours, S. W. Jewett.
Weybridge, Vt. Dec. 1842.

FEEDING SHEEP.

To Messrs. Gaylord and Tucker—In my note to you, published in the Oct. No. of your paper, I left it to appear that in regard to Mr. Grove's feeding, I quoted only from his letter published in the Transactions of the State Society. Allow me to give proper credit for that part of my quotation respecting his feeding, which Mr. G. objects to as not having made use of. I found it in the August No. of the "American Agriculturist," where, after a general statement of his feeding, similar to that in the Transactions, he says, "to my Ewes, five weeks before lambing, I give as much hay as they will eat, and four bushels of potatoes to the one hundred."

In my communication I had intended only to have drawn a comparison between our respective animals, and was not aware I had written any thing that could induce strife between the owners. Mr. Grove's well known excellence as a shepherd, should have induced more liberality over the errors of his junior.

I had intended having ready for the January No. of your paper, a portrait of my South Down Buck, that took the 1st premium at the late State Fair, and to have asked its admission into your paper, but shall be disappointed in procuring it before the February paper.

I am yours, respectfully,
J. McDonald M'Intyre.
Albany, Dec. 21, 1842.

BERKSHIRES IN NEW-JERSEY.

Dear Sir:—The imported swine which you chose here from my Piggery, last month, and which I this day ship you, per canal boat, were selected by me last year, from the very best and choicest breeding of Berkshire stock in England. In making my selections there, I not only paid particular attention to an enlarged size, over most of those heretofore imported, but also to their general fineness of point, especially of the skin and hair, aptitude to fatten, quick growth, and early maturity.

To accomplish this, I took unwearied pains, looking over the herds at the different places from whence the stock was chosen, so as to be satisfied of its general good breeding, that I might not be deceived by a promising individual example, and I find, now, upon comparison with those bred here at home, and also previously imported, that these selected by me are a most superior lot. Though scarcely a year old at his purchase, Hagbourn cost a higher price than any other animal of the importation; and I consider him a most superb hog, and what litlte stock we have bred here from him, appears very promising and gives great satisfaction.

Most of the other sows in your purchase were by imported boars, and all are of good size, fine points, and noted breeders. I cannot think but you will do well with them, and that the stock will not fail to please all your customers far and near. Trusting that all will arrive safely and meet your expectations, I remain,

Very respectfully, yours,
A. B. Allen.
Mr. Chas. Starr, jr. *Mendham, N. J.*
Buffalo, Oct. 4, 1842.

Editors of the Cultivator—It is said that three mules will not consume more food than two horses, and that the mule is much less liable to disease than the horse; also that mules will generally remain good for use till 40 years old, and will do as much work as a very good horse; and also out-travel a horse team with a load.

If these are facts, and I believe they are, why not lend your aid towards the more general introduction of mules? Magnolia.

Domestic Economy.

ORANGE COUNTY BUTTER.

Dr. Bates, of Maine, having spent some days at Goshen and Minisink, in Orange co. in this state, has given to the Maine Cultivator a full account of the process of making the butter for which this district is so famed. Good butter is an article of so much consequence to every one; and there is, notwithstanding all that has been said and written on the subject, so much miserable butter offered in the market, that we have for the benefit of our butter making friends, condensed the paper of Mr. Bates, omitting nothing essential to an understanding of the method pursued in making Orange Co. Butter.

"I visited Gen. Wickomb's yard in Goshen, where I saw 40 cows; all, or nearly all, grade animals of the Durham short horned breed. Every cow has a separate stall, and outside door made of three upright boards, with two open spaces 3 inches wide, to admit the air. * * * Now for the butter making. The milk is strained in pans or oaken tubs, holding two pails full. Every thing is done in the cellar. The milk is not meddled with until it is *coagulated,* when each day's, or each half day's milk is put in the churn with nearly an equal quantity of water, cold in summer, and warm in autumn or winter, to bring it to the proper temperature, which is from 55 to 60 degrees. The churn is made in the barrel form, of oak; hooped with iron, with a wooden hoop three inches wide at top, in which the cover rests. For six to ten cows, the churn should hold 30 gallons, and in that proportion for a larger number. I believe they rarely exceed two barrels, as in large dairies they prefer to churn several times a day, to the use of larger vessels. Churning is never done by hand, except for a single cow. In small dairies, the churn is worked by a dog or sheep, the latter being preferred; the larger have water or horse power. The dog or sheep, walks on a wheel 8 feet in diameter, inclined at an angle of 22°, cleats being nailed on to prevent the feet of the sheep from slipping. These wheels are often out door, sometimes in the cellar; the motion is communicated by gearing and iron rods.

When the butter begins to curdle, all is washed down with another pail of water, and the motion continued until the butter gathers. *Let it be remembered the butter is never touched with the hands.* All is done with the butter ladle, the handle about 5 inches long. The ladle and the tray for working, are always kept filled with cold water, when out of use, to prevent the butter from sticking to them. The butter is first worked and salted in the tray. When it has stood long enough to become firm, after salting, all the butter milk is worked out, and it is packed down solid in tubs of 40, or firkins of 80 pounds. In packing, if it cannot be made solid by the ladle, a pounder is used. When one churning has been packed, a cloth is put on covered with salt. This is taken off at each addition, and replaced, until the tub or firkin is almost full, when half an inch of strong brine is poured over the cloth. Salt is never left between the layers. *Blown* salt is preferred to *ground,* because it is finer, and diffuses itself sooner and more perfectly through the mass—it requires a greater measure of this salt, but the same weight. A churn used daily, is cleansed twice a week. The tubs are prepared of oak or ash, and when wet, rubbed thoroughly with as much fine salt as will stick on the inside. Butter thus made and cured, will keep for years in a cool place, and sells on an average, fifty per cent higher than butter made in the usual way.

Cows average from 150 to 200 pounds in a year, and the butter milk is estimated to make 100 lbs. of pork, which formerly paid all the expenses of making the butter, but at present prices only about one-half. Some churn over the butter milk, after it has stood one day, and pouring off the water. One man, who had ten cows, told me he made all the butter used in his family in this way, and had 20 lbs. on hand."

EGGS.

Messrs. Editors—In a late number of the Mass. Plowman, I observed the following statement:—"Mr. E. G. Tucker, of Milton, tells us he obtained 600 dozen of eggs in one year, from 83 hens—this was his largest number of fowls—he sometimes had less; that for 562 dozen, he took 100 dollars within one cent. The whole amount of his cash receipts was $123.33, and his cash expenditures were $56.43, leaving him a balance of $66.90. Mr. Tucker has very convenient yards, and high picket fences. He lets his hens run at large when they can do no mischief, and he can put them in pound just when he pleases."

This statement induced me to look over my egg account for the past year, and I find the following results. When my hens commenced laying, January 19th, I had 37 hens; when they ceased laying, November 20th, I had 26 hens; the average for the time might have been 32. The number of eggs collected was 3,298, or about 276 dozen. As my hens run at large, numbers of nests were "stolen" by the thieves, in the high grass about my barns, and I lost 208 eggs in this way; the hens from some cause forsaking their nests, or being broken up before hatching. I did not intend to allow any to set, or attempt to raise any chickens; but one or two were overlooked, and I had a dozen of fine chickens for thanksgiving. The expense of keeping my hens has been trifling. I had some corn that did not ripen in 1841, and of this, a quantity was kept at all times during the winter and spring months, within their reach, for them to eat at their pleasure. Ten dollars would be a high estimate of the value of the matters fed them; and during the rest of the season they received no attention as to feeding, whatever. My hens were all young; and I would advise those who wish to have an abundant supply of eggs, to keep none but such for laying. Where chickens are to be reared, older hens will be better, as they will rarely leave their nests, which young ones are apt to do. I kept three cocks with my hens the most of the time. The gathering the eggs, was the amusement of my little boy of eight years old, who for this service, received a satisfactory gratuity. As to feeding hens, I prefer keeping a supply of food constantly within their reach, as I believe they will eat no more than they need, and certainly no more than will be profitable. Starving hens is as unprofitable as starving pigs or cows; and from lean hens no one need expect many eggs, or those of good quality. A Lover of good Poultry.

MAKING VINEGAR.

Editors of the Cultivator:—S. E. T. asks, in the Cultivator of the present month, to be informed how to convert cider into good vinegar.

In large cities, vinegar is manufactured for sale, by adding sulphuric acid to cider, and it becomes sour immediately. But this is not the best quality of vinegar; and it changes to a black color when exposed to the air.

To be always supplied with good vinegar, procure a cask of the best quality of vinegar, and as vinegar is drawn from the cask, add one or two quarts of sour cider daily, so as to keep the cask nearly full, and you will always be supplied with good vinegar. If too much sour cider is added at one time, it reduces the vinegar, and it will not be easy to restore it to the best quality.

Procure cider annually; and in the spring, draw it into other casks. Repeat the drawing from one cask to another, and it will soon become half made vinegar for feeding the best vinegar cask. If you would be well supplied, procure several casks for half made vinegar, to supply the good vinegar casks. I have practiced this mode for a long time, and esteem my best vinegar cask of great value.

If S. E. T. will add a piece of bread dough to his cider, and rack it off several times, or shake the cask often, it will soon become good vinegar, if kept in a warm cellar or room.

Another Recipe.—To a hhd. two thirds full of cider, add for each barrel one pint of white beans, one quart of pounded corn cobs, four sheets of brown paper covered with molasses, one barrel of rain water to be added. It should be placed a foot from the ground, and shaken frequently.

By this plan vinegar may be made of cider from the press in a week.

This is said to be a good recipe, but I have not tried it.

Respectfully, David Tomlinson.
Schenectady, Dec. 15, 1842.

Winter Butter.—To make butter in winter, place the pans containing the milk in hot water about 25 minutes, or till it begins to change, for there must be a slight sour in the cream to insure a good churning. A little of the old cream or rennet may be used to change the cream. The operation of churning such cream seldom exceeds twenty minutes. A.

"Recipe for making Corn Cakes.—Take one pint of good cream, one pint buttermilk, one egg, one teaspoon full salæratus, one tea spoon full salt, and stir in meal till it forms a thick batter, and bake on a tin or other vessel as is convenient. If made with good meal the cakes will be excellent."

Veterinary Department.

ABORTION CAUSED BY SMUTTY OATS.

IT is well known to medical men that there are various substances which will produce strong contractions of the womb, and are sometimes used in midwifery to effect this purpose. Of these substances, *ergot*, or the horned or smut rye, is the most common, and its fatal effects, where it occurs on the grasses, as it sometimes does, renders its pernicious effects well known to farmers. But it seems not to be generally known that smut in oats should be classed with the most active of agents belonging to this class.

We find in the Tennessee Agriculturist, an interesting account furnished by Francis Gordon, of the effects of smut in oats, in the case of four mares owned by Mr. Denny, of Tenn. The whole were fed on corn and fodder during the winter, and did well. About the first of March, they were fed with cut oats, of which from one-fourth to one-third were smut or black heads. "One mare soon lost her colt, and continued to exhibit signs of labor pains for several days, till she died. A short time after, two others lost their colts, and continued to make apparent efforts to foal, showing uterine contractions for ten days. They reduced in flesh rapidly, till Mr. Denny informed me of the circumstance, when suspecting smut to be the cause, I advised him to discontinue oats as a feed. He did so, and the mares soon began to recover."

"Why did not the fourth mare lose her colt also? Because she was not fed on oats. She has brought forth a colt at the proper time. A gelding and two oxen were fed on the cut oats during the whole time and all did well. This was because they had no womb to be acted on by the smut. Why did Mr. Denny's oats produce abortion, while other farmers have fed their mares on oats without such misfortune? Because Mr. Denny's oats had between one-fourth and one-third of black heads, while theirs were probably better oats. Why did the mares continue to show signs of powerful uterine contraction after they had lost their colts? Or why did the labor last so long? Because they were continually fed with the same oats; and therefore every new meal produced new labor pains. But when the two last mares were put upon fodder instead of oats, the womb was no longer stimulated to contract, and they immediately recovered."

Dr. Gordon thinks it very probable that many of the cases of abortion in mares, which have been ascribed to "clover, flax seed, beef's blood, swimming in water, &c." as well as those cases in which mares after being sent to a stallion for the whole season, have proved to be not with foal, may be traced to this cause. However this may be, the facts stated are sufficient to put farmers on their guard against feeding breeding mares with smutty oats.

SICK HOGS.

THE diseases and treatment of domestic animals, must necessarily claim the attention of the farmer. Sick hogs, I have been informed, could not be cured, and when they would not eat, there was no hope. In consulting Loudon, similar opinions were expressed, and last autumn, when one of my neighbors lost three hogs by sickness, I began to think the general opinion was correct. But in Oct. 1842, I was led to draw a different conclusion, the following case being the first in which I had acted as hog doctor. The circumstances were minuted at the time, and you have them as entered in my memorandum book.

October 5th, 1842. This morning a young half breed Berkshire sow, with a litter of seven pigs five days old, was discovered to be sick, and refused to eat. No cause for her sickness is known, unless she may have eaten something among the sea weed, half a cart load of which was thrown into the pen yesterday. Had been fed upon swill made with bran, or ground corn and barley, and buttermilk.

About ten o'clock, A. M. let her out of the pen, when she appeared to be blind, would turn around in a circle, or run against the fence, or any obstruction before her.

Turned her into a field of grass, when she kept moving around in a circle, with her nose to the ground, without eating the grass. Offered some buttermilk which she would not take.

Conceiving the disease to be in her head, I cut off the end of her tail, and slit her ears to bleed her, to which she made no resistance and no outcry.

After wandering about the lot until noon, the tail still trickling with blood, caught and threw her down to administer some medicine. Drawing her mouth open with a rope, the following dose was given, mixed with molasses, and made thin enough with water, to be easily poured down:

Recipe—Calomel, a tea spoon full.
Powdered jalap, two tea spoons full.
Sulphur, one tea spoon full.
Ginger, one tea spoon full.

Her paps being full and hard, put the pigs to her, but she took no notice of them, and kept moving as before.

In the afternoon had spasms, drawing her mouth and neck to the right side. Now thought that we should lose the sow and her litter, as the pigs were too young to feed. In order to save a part of them, however, three were given to another sow, which littered on the same day, and had pigs so much like them, that after being together a few minutes, we could not tell them apart.

In the evening the animal was no better, and the medicine had not operated. Caught her again, and poured down her throat, without much resistance, (as she had become weak and hardly able to stand,) a quarter of a pound of Rochelle salts, dissolved in warm water.

October 6th. The medicine has operated, and this morning the animal has improved; taking some swill, and during the day, some soft nubbins of corn. In the evening, rather languid and eating sparingly.

Oct. 7th. In the morning much better. In the afternoon well and lively as ever, eating her allowance, and taking care of her pigs.

Nov. 10th. The sow and her pigs all alive and doing well. RICHMOND.

MANAGEMENT OF HORSES.

MESSRS. GAYLORD & TUCKER—I send you my experience and observations on the treatment and management of Horses. As there is no animal that contributes so largely to the comforts of man, as the horse, it is highly important that we understand their proper treatment.

With regard to the Colt Distemper, my practice is, whenever they show signs of that disease, to feed them tar; which I do by taking a small paddle, and with it putting the tar down about the root of the tongue and back teeth; this done a few days in succession, has always proved an effectual cure.

With regard to Botts, I only say with a writer in the Cultivator, keep the bott nit shaved off of your horses. I offer this advice from an experience of 40 years.

One of the most necessary arts in raising horses, is to understand castrating; but before I commence, I must say to my brother farmers, throw away all your traditional customs, such as your iron clamps, hazle sticks, searing irons, tallow candles, fat pork, cording twine, and a number of other operations, that only serve to torment and disable the animal. It is astonishing that such practices have continued for so many centuries. Throw the horse in the usual way, and with as little exercise for the horse as possible; after making him secure, without any further preparation, I proceed to extracting the castings precisely in the ordinary way of altering a pig, taking care not to cut across the veins, and to be very careful to scrape the cord of the casting off, instead of cutting it square off; this will prevent too much bleeding. I then apply a little salt and lard to the wound, rubbing a little lard on the loin to prevent cold; but do not know that those precautionary measures are necessary, for I have had them do equally well without using anything but the knife. In this way, horses will stiffen or swell but very little, and require no after applications, and in a few days they are fit for use. If they show too great a disposition to bleed, keep them from exercise for 24 hours.

Let me say to all who have skittish horses, cut off your blinds, and if your horses scare at a leaf, let them see that it is only a leaf. A horse is a reasonable animal, and if he has a chance to look around him, he is not going to run unless something shows a disposition to hurt him. If drivers would take the precaution to turn a horse's head quick towards the danger from which he cannot be reined, and let the animal see his danger, he would be as ready to shun the danger as his driver. Two years since, I had a pair of horses that would runaway at every unnatural touch or noise, until I cut off the blinds of the bridles, and they have never runaway since. To test the truth of this, put a blind bridle on a skittish ox, and he will be almost unmanageable. Respectfully, your agricultural friend. CLINTON SHATTUCK.

Galena, Ill. 1842.

RELIEF OF CHOKED CATTLE.

MESSRS. EDITORS—Some two or three years ago, I began to feed potatoes to my cows, and the first time I fed them one of them got choked, and bloated like a bladder. I took my knife and stuck it into her, just forward of the hip bone on the left side; the wind poured out; the bloat went immediately down; I turned her out of the stable, and she went to the field. After some two or three hours, I went to see her; she was lying down, and the potatoe was lying on the ground before her. Some two or three days after, I had another cow choked. She went through the same process, and with the same result. Sometime after that, one of my neighbors called on me, and said one of his best cows was choked with a potatoe. I went with him and tapped her as before described. I found the hole inclined to stop up by the moving of her skin. I took a goose quill, cut off both ends, and put it into the hole; the bloat went down, and I left her. Two or three days after I saw him, and he told me she threw out the potatoe after two or three hours, and was well. I have since fed a good many potatoes, and no accident has happened. I am of the opinion that this is the surest and most expeditious way of relieving dumb beasts, as well as the safest; at least it is the best way that I know of. Try it. P. OTIS.

Galway, Saratoga co. 1842.

MESSRS. EDITORS—Your correspondent Richmond, (p. 200, vol. IX,) by consulting a surgeon, will learn that his method of operating on male animals, is more painful than it need be. The spermatic cord consists of three parts, viz: an artery, a vein, and a nerve. When a surgeon operates, he passes a ligature by means of a crooked needle, around the artery only, without including the nerve, which is the seat of feeling, and tying it will cause great pain, which will continue until the cord rots off. The nerve can be distinguished from the blood vessels, by feeling like a cord when squeezed, also being lighter in color. C. H. TOMLINSON.

Schenectady, Dec. 12, 1842.

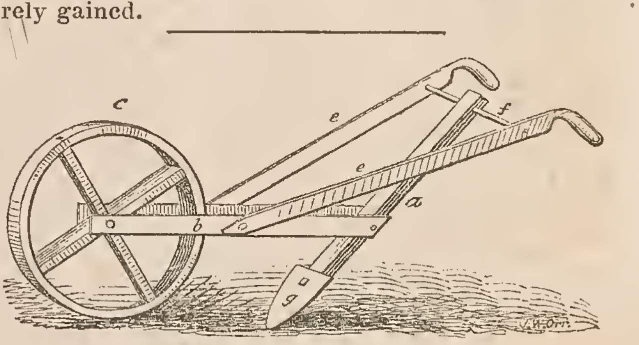
The Garden and the Orchard.

SECOND BLOSSOMING OF FRUIT TREES.

THE past year, (1842,) has been remarkable for the numerous instances of second blossoms, and in some cases fruit, which have occurred on fruit trees, particularly the apple. In one instance in Missouri, the second crop matured, but this must be considered a very rare occurrence. By a number of the Gardener's Chronicle, edited by Prof. Lindley, we find that this second blossoming has not been confined to this country. He says in a reply to a correspondent, "there are many *freaks* of nature which we cannot understand or explain. Among them is the unusual circumstance of an apple tree (with apples on,) blossoming again at this season of the year."

In the cases which have fallen under our notice, this second blossoming could be clearly traced to injuries which the foliage of the tree had suffered. In the one case, the leaves and fruit were mostly stripped from the trees of an orchard by a hail storm, leaving them almost as sear and dry as if they had been scorched by a flame. In a few days new foliage began to appear, flowers on most of the trees showed themselves, and young fruit, and that which was mature, was afterwards to be seen on some of them. In another instance, one-half of an apple tree full of flowers, was stripped completely by the common caterpillar, which devoured both leaves and blossoms. Some of the branches thus stripped, afterwards showed many flowers with the new foliage that covered them, but it was too late in the season for the fruit to form, or at least to reach any considerable size. In these instances, the defoliation of the trees produced the same effect that their hybernation during the winter does; and the temporary check their functions received, was followed by similar results of new leaves and flowers. We once saw a branch of a common cherry tree covered with white blossoms, while the rest of the tree was loaded with fruit nearly ripened. An examination showed that the branch had received an injury, which by preventing the circulation, had doubtless in the same degree retarded the blossoming. In this case, the cause was somewhat different from that of the apple trees. Here it was simple retardation; in them injury caused a temporary suspension of the functions, and their renewal was followed by the same results which follow their annual winter suspension.

The fact that the blossoming of fruit trees may be retarded, may be turned to good account in those places where fruit is liable to be killed by late frosts in the spring. A layer of snow around the trunk, covered with straw, or the refuse tow of flax, will retard the blossoming of trees for two or three weeks, and to that extent lessen the danger from frost. Nature sometimes performs this effect on a great scale. The southern margin of Lake Ontario is an instance of this. It is well known that this tract of country is one of the best in the state for fruit, and this is in a great degree to be attributed to the influence of the lake. During the winter, this great body of water is cooled nearly to the freezing point, and as its temperature rises slowly in the spring, it has the effect of lowering the temperature of the air near it, and consequently of retarding the blossoming of fruit in the same degree. The destruction of the young fruit by spring frosts, is a thing there almost or quite unknown. The good effects of the lake are felt to an equal degree in the fall, as the heat of such a mass of water is given off gradually, and thus late fruit attains a maturity and perfection, unchecked by frost, elsewhere rarely gained.



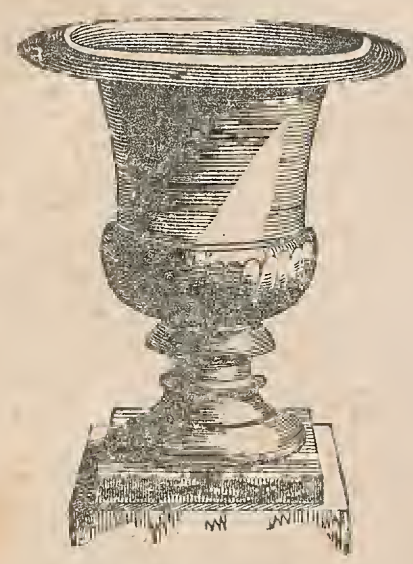
HAND PLOW.—(Fig. 11.)

MESSRS. GAYLORD & TUCKER—I send you a description of a hand plow, which if properly constructed, will, I think, be found to answer very well in loose soils. It is not intended for stiff land. Its construction is similar to that of the shovel plow so generally used in this region of country, with a wheel attached to the end of the beam in front. I do not now recollect the dimensions of the one which I formerly made, nor do I consider it essential, as each one can proportion it to suit his own fancy. The cut (fig. 11,) will give you a crude idea of its construction. Let *a.* be dressed out to the thickness of 2½ inches, and three feet in length, to the lower end of which, let the shovel *g.* be attached with a screw. Take two pieces of scantling 3 feet 8 inches in length, one inch in thickness, and four inches in breadth, for the side pieces *b. b.*, and bore a large auger hole through one end of each, for the wheel *c.* to revolve in, and attach the other two ends to the sides of *a.* Construct a wheel *c.* 32 inches in diameter. The handles *e. e.* may be 3 or 3½ feet long, with sufficient breadth and thickness to give strength. Mortice a hole through *a.* 1 by 1½ inches. Then dress *f.* so that it will fit the mortice exactly when divided equally. By boring holes through the handles *e.*

e. you can confine them to the extremities of *f*. The shovel g. may be made 4 inches broad, and 6 or 8 inches in length.

You will readily perceive that the wheel placed in front of the plow, answers the purpose of horse power; nothing being necessary but a plow boy, who by pressing his weight against the handles, causes it to go right "ahead." A YOUNG FARMER.

Wood Lawn, N. C. Sept. 23, 1842.



MOTT'S GARDEN VASE.—(Fig. 12.)

THIS is a representation of one of the cast iron Vases exhibited by Mr. J. L. Mott, of New-York, at the Fairs of the State Ag. Society and American Institute, and to which honorary premiums were awarded at both places. "In pattern equal to the finest Italian models, in durability far their superior, and embracing imitations of free stone, granite and marble. The cheap rate at which they can be furnished is another, and not a small recommendation of this invention of Mr. M." The Vase is 30 inches high, and 25 inches in diameter. They are sold plain, at $9—painted, with three good coats, at $11—in imitation of marble or granite, and japaned, $12,50.

GARDEN VEGETABLES.

EARLY CUCUMBERS.—The following has been found by the writer, an easy and successful way to raise them. Place small pieces of dead turf, as large as one's hand, just below the soil in a hot bed, and plant the cucumber seeds upon them. When the stems are two or three inches long, the pieces of turf are removed, plants, roots, and all, to rich garden soil, and they will advance rapidly in growth and produce fruit two or three weeks earlier than those planted in open ground. Suitable turf is easily obtained where grass has been inverted the previous summer or autumn. The young plants should be set out as soon as they will probably escape frost.

EARLY TOMATOES.—Where there is no hot bed, these nave been successfully started in pots kept in a warm room, and the fruit ripened a week or two in advance of those otherwise treated.

While the fruit is yet green, I have much accelerated the ripening, by removing the larger leaves from dense bunches of the fruit, and placing white boards behind them, so as to reflect the sun's rays strongly upon them. They soon became red, while the rest remained unchanged in color. Would not planting them, as well as many other of the smaller garden fruits, against a white washed fence or wall, prove of great advantage? It is estimated in England, that a good wall for fruit is equal to an advance of six degrees towards the equator; why then is this powerful means of producing early fruit, so generally overlooked in this country?

EARLY POTATOES.—It is well known that the eye end of a potatoe will yield a crop earlier by some days, than the root end. This appears to be owing simply to the earlier growth of the sprouts from the eye end. Earliness will be greatly increased by placing the seed potatoes in a box of moist sand, early in spring, in a warm place in the house; and then planting them when the shoots are about two inches long, taking care not to break them off.

STRAWBERRIES.—Many cultivators suffer their beds to run wild, and still obtain tolerable crops; but a still better way is to plant them in drills or hills, and *keep them so*. Hoeing or cultivation, benefits them as much as it does corn. By pursuing this course, the writer obtained *nearly a pint* of large, fat, plump strawberries from some single plants the past season.

LIME.—This success with strawberries, might have been partly owing to the use of lime. Its tendency to diminish the growth of leaves and stem, and increase that of seed and fruit, is well known. It had been applied two years before to the strawberry bed, at the rate of about half a bushel to a square rod. A similar effect was observed on tomatoes, when the manure they received, which was well rotted, had a small quantity of lime thoroughly mixed with it. The growth of their stems was moderate, and the product in fruit, very abundant. Others, manured without lime, grew abundantly in stem, and the product of fruit not quite so great. Slacked lime was used. The difference might have been owing to other causes; at any rate, more experiments are needed.

EARLY LETTUCE.—This was obtained at least *three weeks earlier* than other lettuce sown in the hot bed, by taking up plants, sown the previous autumn in open ground, and transplanting them into the hot bed as soon as it was made. They were urged forward in growth rapidly, by the new heat they received, and formed heads four or five inches in diameter, while the other lettuce was hardly an inch high.

SELECTION OF VARIETIES.—This is a matter of very great importance, where excellence in quality is desired. For lettuce, I have found the Early Curled Silesia, and Imperial Cabbage Lettuce, very good varieties. The latter forms large fine heads of great delicacy.

The best Cabbages appear to be the Early Sugarloaf, Green Savoy, and old fashioned large winter Drumhead. The Sugarloaf heads earlier than the Early York, and appears to be superior to it in quality. For those who like a very tender cabbage, the Savoy will stand pre-eminent. The character of the Drumhead we all know.

I have tried many varieties of the turnep for table use, and find none to satisfy most persons who have eaten them, better than the White Norfolk, whether for early or late use.

Of beets, the Bassano excels any that I have tried. It is very early, will keep through winter in moist sand, and is as much more delicate and sweet than the red turnep beet, as the latter is better than the old fashioned, stringy, long blood beet.

KEEPING ROOTS THROUGH WINTER.—The most convenient and neat method of doing this, is to procure barrels, hogsheads, or large boxes, place them in the cellar, fill them with the potatoes, turneps, beets, or other roots, and fill in the interstices with clean sand, which is to be kept moist. It is to be *clean* as a matter of convenience and neatness. One load will cover a large quantity of roots, and may be used for many successive years.

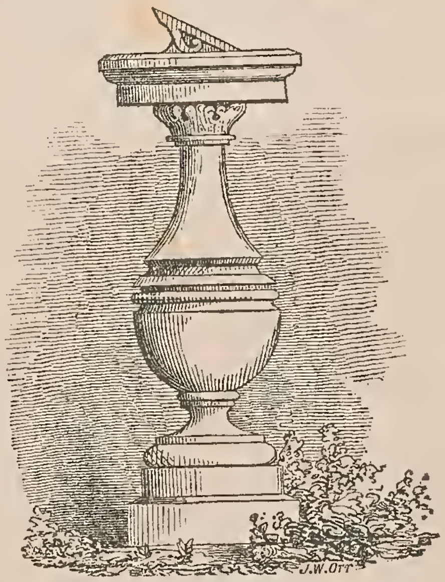
Macedon, N. Y. 1842. J. J. THOMAS.

A TELESTICH.—NEW-YEAR'S SALUTATORY.

Another year is fled. "Time, as the weaver's shuttle, flies as swif T!"
Again, with sanguine hope—with zealous cheer, we loose our cable, launc H,
Dreaming each star and wind our friend, on the tumultuous sea of lif E.

Yet, long as years their endless cycles roll, in speech stentorfii C,
Through your fair columns preach, as e'er before, instruction wise. May yo U
Long live, "to sow in them the seed of knowledge agricultura L"—
To climb to those vast, boundless fields of scientific, living though T,
On science' hill; and there "*drink deep her crystal fountain*"—(that love I,)
Which shall, by proper culture, upward spring, and bring forth fruit—some V,
Some twenty, some an hundred fold. Press on until the arcan A
Of science is unfolded to your raptured gaze. May you have migh T
And wisdom to perform your arduous task and error to foreg O
And may your toils be crowned with bright success, through each revolving yea R.

Lansing, Tompkins Co. Jan. 1, 1843. Yours, as ever, S. E. T.



THOM'S SUN DIAL.—(Fig. 13.)

"I count the hours that are unclouded."

The above is a view of the beautiful Sun Dial, cut in free stone by the celebrated Thom, which was exhibited at the late Fair of the American Institute. "Throughout the continent of Europe, and the British Isles," says Mr. Walsh, in his report on the subject, "gardens are considered incomplete without a sun dial, while no expense is spared in procuring such specimens as may throw all competition into the shade. We have in this piece of Mr. Thom's, all the qualities that excite the admiration of amateurs. Its height is 4 feet 4 inches, the lower portion of the base 21 inches wide, the upper $15\frac{1}{3}$, the shaft 2 feet, and swelling gracefully out in the center, while the capital is 11 inches high. We regret to say, that from the very nature of the case, the highly finished oak leaf ornaments around the base of the capital, will be partly obscured from view, by the projection of the square designed for the gnomen. This disadvantage has been seen and guarded against, by the raised platform, on which Mr. T. has caused it to be placed."

GRAFTING.

IN the spring of 1841, a neighbor gave my son a few choice pear scions for grafting. Not being prepared with stock on which to engraft them, we looked around the farm and found a few young trees that had sprung up spontaneously along the fences and water courses, and for the want of better, took them for the purpose intended. Being novices in the art, we consulted the volumes of the "Cultivator," and found therein, directions for performing the necessary operation, and a recipe for a composition to envelope the graft. But at that time we had not a single article at hand to make it.

What was to be done? My little boy was anxious to use the scions, and I wished to indulge him. In reflecting on the subject, I concluded that the envelope was intended to secure the graft in its new position, protect it from the weather and keep it warm. In looking over my medicine chest, my eye fell upon a roll of adhesive or sticking plaster, such as is used by surgeons, to draw together and dress wounds. This, said I, will do. The plaster was warmed and spread upon strips of rags, and then these strips were wound around the stock and the scions secured in their places.

In the course of the season, we were pleased to find that our grafts grew and flourished, and not one failed, and some are now of considerable size and length, though several have been bitten by cattle. Thus an emergency has shown that surgeon's adhesive plaster will answer to bind and retain scions in their place, when removed to another tree. RICHMOND.

NOTICES TO CORRESPONDENTS, &c.

COMMUNICATIONS have been received during the past month from N. Reed, F. A. Phenix, M. T. M'Gehee, Wm. Partridge, Solon Robinson, John Moxon, W. H. Sotham, Chemist, Plowboy, Th. Gilbert, Magnolia, C. H. Tomlinson, A Lover of Good Poultry, J., A Constant Reader, J. J. T., A Wheat Grower of Western N. York, J. Odell, N. Darling, P. P., John Beach, E. Manley, A. B. Allen, Tweedside, D. Tomlinson, J. McD. McIntyre, S. E. T., Richmond, D. G. Mitchell, S. W. Jewett, H. W. S. C., R. T. Bentley, J. H. Young. K. Gallup.

BOOKS, PAMPHLETS, &c. have been received as follows;—From *Thos. Hancock*, Esq., Burlington, N. J., a continuation of the "Transactions of the Penn. Hort. Society,"—from some unknown friend, "Address of Hon. Garrett Andrews to the Planters' Club of Hancock County, Ga."—from *Tappan & Dennett*, publishers, Boston, Sparks' "Life of Washington," 2 vols. 12 mo., and Smith's "Universalism Renounced,"—from *J. R. Ames* of this city, two large 12 mo. vols. entitled "The Bible of Nature, and substance of Virtue"—from the Author, "An Address before the Fredericksburgh Ag. Society," at its late meeting, by J. M. Garnett, Esq.—from the Author, "The Muok Manual," by S. L. Dana, M. D., 2d edition—from *E. H. Pease*, bookseller, of this city, Part I. of "Alison's History of Europe," and Parts I. and II. of Brande's "Encyclopedia of Science, Literature and Art," two valuable works, which are now publishing in parts, at prices lower than any useful work has heretofore been published—from the Author, "An Address before the Monroe Ag. Society at Rochester, Oct. 26, 1842, by Henry Colman, President of the Society"—from some unknown friend, "An Address by W. W. W. Bowie, Esq., before the Prince George's Co. Ag. Society, Nov. 3, 1842"—from the publisher, Charles Foster, Cincinnati, "The Western Farmer and Gardner's Almanac for 1843."

☞ It is not in our power to comply with the requests of Thomas Gilbert, Esq. Georgetown, New Brunswick, or "P. P." near Pittsburg, Pa, nor can we answer the inquiry of Parsons & Co. Flushing.

AGENTS FOR THE CULTIVATOR,

IN THE PRINCIPAL CITIES.

Boston—Eben. Wright, Druggist, 46 Milk st.
Hovey & Co. Seedsmen, 7 Merchant's Row.
Providence—A. H. Stilwell, Bookseller.
Hartford—E. W. Bull, Druggist.
New-Haven—George Sherman.
New-York—Dayton & Newman, Booksellers, 199 Broadway.
Utica—Wm. Bristol, Druggist.
Rochester—Samuel Hamilton, 8 Buffalo st.
Philadelphia—Judah Dobson, Bookseller.
D. M. Landreth & Co. Seedsmen.
Pittsburgh—R. G. Berford, 85 Fourth st.
Baltimore—Dr. G. B. Smith.
Washington City—F. Taylor, Bookseller.
J. F. Callan, Seedsman.
Richmond—R. Hill Jr. & Co.
Charleston—D. M. Landreth, Seedsman.
St. Louis—E. P. Pettes.
Augusta, Geo.—Wm Haines, Jr.
Nashville—A. Fall.
Jas. A. Creighton & Co. Periodical Agents.
Louisville—James George, Ag. Warehouse, 4th st.
Montreal, L. C.—Benj. Brewster.
Toronto, U. C.—Eastwood & Skinner, Booksellers
Halifax, N. S.—C. H. Belcher, Bookseller.
St. Andrews, N. B.—G. F. Campbell, Esq. P. M.
St. Johns, N. B.—T. H. Wentworth, Esq. P. M.

CHARLES STARR, JR.
Mendham, Morris Co. New-Jersey,

WILL be prepared to execute orders the coming spring, for thorough bred Berkshire Pigs, from the imported Boar Hagbourne, and a superior boar of Windsor Castle family, and fifteen choice sows, lately procured from A. B. Allen, Esq. of Buffalo.

Pigs of this superior stock, from two to three months old, will be delivered, well caged, on shipboard, from twenty-five to thirty dollars per pair.

Persons desiring pigs, or full grown animals, can be supplied with all the advantages of Mr. Allen's stock, at Buffalo, without incurring the risks and costs of canal transportation, the advertiser's residence being but half a day's ride from N. York.

January, 1842.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. X.—NO. 2. ALBANY, N. Y., FEBRUARY, 1843. CULT. & FAR. VOL. IV.—NO. 2.

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LUTHER TUCKER, PROPRIETOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

MONTHLY NOTICES.

☞ COMMUNICATIONS have been received during the past month from M. S., D. W. Brodnax, R. A. Avery, Kentuck, John Lewis, G. Cook, Commentator, J. J. Reed, C. H. Tomlinson, Za. Drummond, Sanford Howard, D. B. C., C. N. Bement, D. G. M., A. C. Stevenson, N. B. Cloud, Quercus, D. S. Curtis, H. D. E., S. W. Jewett, D. K. Minor, Sarah, J. Wells, and Q. E. D.

OUR thanks are due to the editors of the *New Farmers' Journal*, London, for the continued files of that valuable paper—to S. H. HUNTINGTON, Esq. and Dr. D. W. GRANT, for copies of the "Transactions of the Hartford Co. Ag. Society for 1842," including the annual Address of Mr. Huntington, Reports of Committees, &c., making a most valuable pamphlet of over 90 pages, some extracts from which we shall give hereafter—to S. W. JEWETT, Esq. Weybridge, (Vt.) for a portrait of one of his fine Paular Merino Bucks, painted by Saxe, which makes a valuable addition to our Gallery of Portraits of Domestic Animals—to Col. AMOS SAWYER, Rochester, for a cock and half a dozen hens of the pure Poland breed. They arrived here safely, and are beautiful birds.

☞ "RICHMOND'S" letter to Solon Robinson, and several other articles intended for this number, are necessarily deferred till next month.

LONG ARTICLES.—We have given a greater number of long articles this month than usual; but they are of such interest that we doubt not our readers will wish rather that there were more, than less of them. The very pertinent and able Address of Mr. WADSWORTH—the interesting Lecture of Dr. PLAYFAIR, now first published in this country—the valuable Essay of Mr. THOMAS—the details of Dr. CLOUD'S Experiments, and our friend ROBINSON'S Hints to Western Emigrants, will, we are confident, induce no regret at their length; for either of them are worth a year's subscription.

HARD TIMES.—A correspondent at Brownsville, Pa., says:—"I have paid your agent for the Cultivator for 1843. He informed me that several had discontinued in consequence of the scarcity of money. To remedy in some degree the withdrawal, I set to work and obtained *four* new subscribers, the money for which I enclose herein; and I wish most sincerely, the Cultivator could be placed in the hands of every farmer in our state. I have it from the commencement, and have derived great advantage from it."

A subscriber at Huntington, L. I., fearing also that "the times" would affect the circulation of the Cultivator injuriously, determined to do what he could conveniently, to make up for losses thus sustained. He says: "I have obtained nine or ten subscribers, and have not been out of my business way. This will show how easily subscribers may be obtained, if our Agricultural friends will make a little exertion. On my way home from the post office with the Cultivator, I got three subscribers." We tender our thanks to these good friends, and hope many of our readers will be induced, from the same consideration, to follow their example. The "hard times," according to present appearances, are likely very seriously to affect the Cutivator the present year, unless those who appreciate its value will make an extra effort in its behalf.

CAPONISING TURKEYS.—"M. S." of Orange county, asks if the operation described by Mr. Keeler, (Dec. No. 1842,) can be performed with like beneficial effects on the turkey? Can Mr. K. answer the question.

CULTURE OF COTTON—We have the pleasure of presenting our southern readers this month, the promised article of DR. CLOUD, on his improved method of cultivating Cotton. It will be seen that there is nothing extraordinary or mysterious in the process. His increased crop has been obtained by the same process which has enabled so many of our northern farmers to increase their corn and many other crops, two, three and four fold—by *the judicious selection of seed, the application of manure*, and *thorough tillage.* We know little of the culture of cotton, but if the practice is no better than that pursued by a correspondent of the So. Temp. Advocate, in the culture of corn, who maintains that 29 bushels per acre is a great crop, we can see no reason why the crop may not be doubled, or even quadrupled by an improved system, under which the land, while it gives this increase of crop, is constantly improving, instead of deteriorating as it does under the old system. That Dr. Cloud's practice will answer equally well on all soils and in all sections of the cotton-growing region, or that even on the same soil he will at all times be as successful as he was the past year, is hardly to be expected; but that his experiments, and the attention which will be excited to the subject by their results, (5,989 lbs. per acre,) will be the means of effecting a decided advance in the culture of cotton, we cannot doubt. We beg Dr. C. to accept our thanks both for his communications and for the interest he has been pleased to take in the circulation of the Cultivator in Alabama. On this subject he says:—"Several of my friends are rather opposed to my communicating to the Cultivator the result of my experiments, as they are fearful it is not sufficiently circulated in the southern or planting region. I say to them, however, that this is one of my principal objects in sending my communications to the Cultivator, that I may thereby give my little mite toward accomplishing the first wish of my heart in temporal matters, which is to see the Cultivator read by every southern cotton planter." In answer to his question as to the extent of the circulation of the Cultivator in the cotton region, we think we may safely say that for the last two years its circulation in that section of the country has exceeded that of any other single agricultural paper of the country. What its circulation will be this year, will of course depend on the exertions of our friends in that quarter to procure subscribers.

"CREDIT."—Scarcely a day passes without our seeing in some of our exchange papers, articles copied from the Cultivator, without any acknowledgment of the source from whence they were derived. This is not right; and if it arises from carelessness, as we presume it generally does, we would remind those who copy so liberally without credit, that they do the Cultivator great injustice by their negligence. The *Hudson Gazette* of Jan. 24, failed to give us credit for the excellent paper of our correspondent, J. J. T. on Garden Vegetables. The article headed "Mr. Webster's Farm," in the *Poughkeepsie Telegraph* of Jan. 25, should have been credited to the Cultivator—also the *three* articles in the Agricultural department of the *Peterboro Chronicle* of Jan. 10.

BUTTER AND CHEESE.—Our correspondent, D. B. C. of Canaan, N. Y. informs us that during the past season he milked ten cows, and a part of the time eleven, and that he made 1006 lbs. of butter, and 1,300 lbs. of cheese, after having supplied his family of eight persons with milk, and raised seven calves. The other facts mentioned by D. B. C. are interesting, and we shall endeavor to make room for them hereafter.

POSTAGE.—The most onerous tax to which the people of this country are subject, is that of postage. It is unequal and unjust in every point of view; and is a grievance which ought to be remedied at once. Our correspondent, S. W. JEWETT, Esq. of Vermont, in a communication just received, and for which we have not room this month, suggests "that if one half, or even one-tenth of the subscribers of the Cultivator would address their representatives in Congress on the subject, a reduction would be effected." We fear, however, that individual complaints will accomplish but little, for these have been made for years without effect. Public meetings should be held generally throughout the country to remonstrate against the tax, and to petition for a reduction. Until this is done, or we have a post-master general of enlarged and liberal views, who has some higher object than to show how much money he can screw out of the people by the most illiberal construction of the post office laws, we shall have little hope of a favorable change.

HORTICULTURAL SCYTHE.—A very pretty article of this kind, manufactured we believe at the request of our friend WALSH of Lansingburgh, has been shown us. It is about 20 inches long, and is admirably adapted for the use of lawns, where it is wished to cut the grass around trees, shrubbery, &c. It is manufactured by Mr. McNamara of Hoosick.

SILLIMAN'S JOURNAL.—The January No. of this work is an unusually interesting one. It contains twenty articles, with several illustrations, from the ablest men of our country, besides the usual Bibliographical and Miscellaneous notices. The proprietors state that its "subscription list has suffered severe losses by the general commercial pressure," and they call upon its friends to do something to make these losses good. There is no work published in our country which reflects so much honor on it, both at home and abroad, as this; and we hope the friends of science will give a prompt response to the call upon them to aid by their efforts its subscription list. For $6 the work will be sent free of postage for one year. It will give us pleasure to forward the names and money of any of our friends, who may wish to become subscribers; though a better way would be to hand the $6 to some post-master, to be forwarded directly to Prof. SILLIMAN, New-Haven, Ct.

THE MAGAZINE OF HORTICULTURE.—This valuable work entered on its 9th vol. with the present year. The January number opens with an interesting "Retrospective View of the Progress of Horticulture in the United States, during the year 1842." This is followed by "Notes on England and France," by WM. KENRICK, author of the New American Orchardist, who returned last season from a professional tour in those countries, which, could we make room for it, we should be glad to transfer to our pages. This Magaine, we regret to learn, is not as liberally patronized as it ought to be; and we hope such of our friends as are in want of a work of this kind, will at at once forward their names with $3, the annual price, to C. M. Hovey & Co. publisbers, Boston.

LARD OIL.—We are pleased to learn that two establishments for the manufacture of Lard Oil and Stearine Candles, have recently been put into operation at Rochester—one owned by Messrs. SAWYER & PERRIN, and the other by Mr. DYER. These establishments will afford a market for a considerable portion of the surplus pork of that region, and thus materially aid the interests of the farmer.

CORN STALK FODDER.—Extract of a letter from "P. P." Pittsburgh, Pa., to the Cultivator:—"I last spring sowed one acre of corn, and find it a most excellent feed for milch cows; in fact, I consider it the best feed we can give them, together with pasture. I cut and fed it green; I had two crops on the same ground. From the little experience I have had, I would say the ground requires to be good, and as free from weeds as possible. The first crop, in our section of the country, should be sown as early in the spring as the weather will permit; the second crop not later than the first of July, to insure a full crop, and time to feed green. The second crop will outgrow the weeds."

A letter from M. P., New-York, says:—"I last year sowed about two acres of corn broadcast. Though I neither measured or weighed the crop, it was so abundant and profitable as green and dry fodder, that I intend doing the same while I have a farm."

BEE HIVES.—Mr. John Forman of Onondaga Hollow, recently exhibited at our office, a model of "the ultimatum yearly renovating miller-destroying bee hive, with a house calculated to facilitate the operations of the hive." From its appearance and the explanations given by Mr. F. we are inclined to think it a useful invention. Any communication addressed to him post paid, at the above place, or to New-York city, will receive attention.

MADDER.—One of our friends wishes to make an experiment in the culture of Madder the ensuing spring, and will be glad to learn through the Cultivator where the roots can be obtained. In answer to the inquiry of the AMERICAN FARMER, on this subject, we have to state that Madder was some years since grown to a small extent, by several farmers in the counties of Otsego and Madison, in this state. We should be glad to learn whether its cultivation has been continued, and if so, whether it has been found profitable. The experience already gained may save others the expense of a trial, or may lead others to engage in it if it has been successful. The editor of the American Farmer will find the information he wishes in the early vols. of the Cultivator.

TO KILL LICE ON ANIMALS.—A writer in the Central N. Y. Farmer, says:—"Take the water in which potatoes have been boiled, and rub it over the skin. The lice will be dead within two hours, and never will multiply again. I have used ten kinds of the strongest poison to kill lice, all with effect, but none so perfect as this."

ANNUAL MEETING OF THE N. Y. S. AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society was held in this city, on the 18th of January. The Society convened at 9 o'clock, A. M. in the Lecture Room of the Young Men's Association, the President in the chair. Gentlemen were in attendance from the counties of Albany, Cayuga, Columbia, Greene, Jefferson, Livingston, Lewis, Monroe, Montgomery, Madison, Otsego, Oneida, Orange, Oswego, Queens, Rensselaer, Schenectady, Steuben, Saratoga, Tompkins and Wayne.

The Report of the award of Premiums on Field Crops, &c. was read by the Secretary, Mr. TUCKER, as follows:

At the regular meeting of the Executive Committee, on the second Wednesday of January, 1843, the several statements of the competitors for the premiums on Field Crops, Essays, Paintings, Engravings, and Designs for Farm Buildings, were referred to appropriate committees, upon whose reports the following premiums are awarded:

ON FIELD CROPS.*

ON INDIAN CORN.—First Premium to *Samuel Phelps* of Ira, Cayuga county. 122 bushels per acre—$15.

Second, to *Wm. Ingells* of Volney, Oswego county. 89 bushels per acre—$10.

Third, to *Joseph F. Osborn* of Port Byron. $5.

Fourth, to *Anthony Van Bergen* of Coxsackie, Greene county. 85 bushels 51 lbs. per acre—Diploma.

ON BARLEY.—First Premium to *Nathaniel S. Wright* of Vernon, Oneida county. 53 bushels per acre—$10.

Second, to *T. I. Vandeveer* of Amsterdam, Montgomery county. 40¼ bushels per acre—$5.

ON RYE.—First Premium to *Israel F. Goodwin* of Westmoreland, Oneida county. 32 bushels and 36 lbs. per acre—$10.

Second, to *T. I. Vandeveer*, Amsterdam. 28 bushels, 29 quarts per acre—$5.

ON OATS.—First Premium to *Samuel Phelps*, Ira, Cayuga county. 102 bushels per acre—$10.

Second, to *Wm. A. Russell*, Salem, Washington county. 97 bushels per acre—$5.

Diploma, to *Israel F. Goodwin*, Westmoreland. 81 bushels per acre.

The Committee also recommend a special Premmiu of $10, to *Geo. Sheffer* of Wheatland, Monroe county, for his crop of oats of 871¼ bushels, from 9½ acres of land, being an average of 91¾ bushels per acre.

ON PEAS.—First Premium to *George White*, Rutland, Jefferson county. 33¾ bushels per acre—$10.

ON POTATOES.—First Premium, to *George White*, Rutland, Jefferson county. 1 acre, 1 8-10 rods—421¾ bushels Pinkeyes—$10.

Second, to *George Sheffer*, Wheatland. 400 bushels per acre—$5.

RUTA BAGAS.—First Premium to *John McConnel*, Canandaigua. 855½ bushels per acre—$10.

ON BEETS.—The First Premium for beets, to *George Sheffer*, Wheatland. 1 acre, 12 rods—1026⅔ bushels—$10.

ON CARROTS.—First Premium to *Wm. Risley*, Fredonia, Chautauque county. 985½ bushels per acre—$10.

ON ESSAYS, &c.

There were no competitors for the Premiums offered for Essays on Agricultural Chemistry, on Rotation of Crops, and on the introduction of New Agricultural Products.

For the Premium for the best Essay on the General Management of the Farm, four Essays were presented. The premium was awarded to *Willis Gaylord* of Otisco, Onondaga county—$20.

But two Essays were offered for the Premium on the Management and Application of Manures. The Premium was awarded to *Willis Gaylord* of Otisco—$20.

DESIGNS.—For the Premium on the best plan of a Farm House, Barn, and necessary out-buildings, three plans were presented. The Gold Medal was awarded to *John J. Thomas* of Macedon, Wayne county; and a Silver Medal to *D. G. Mitchell*, Salem, Conn., for the second best.

PAINTINGS.—The Committee to whom were referred the several Paintings offered for the Gold Medal of the Society, for the best specimen of Paintings of Domestic Animals, recommended that medals of equal value be given to *Woodside* of Philadelphia, and *Van Zandt* of Albany.

The Silver Medal for the best specimen of Floral Painting, was awarded to *E. Whitfield*, Albany.

ENGRAVINGS.—The Gold Medal, for the best engraved portrait on wood, of Domestic Animals, was awarded to *J. W. Orr* of this city.

The following letter from the Corresponding Secretary of the Society, was then read:

Cortland Village, Jan. 13, 1843.

JAMES WADSWORTH, Esq. Pres't N. Y. S Ag. Society:

SIR—Owing to official business of importance, and which does not admit of having the time for attending to it changed, I find it impossible to be present at the annual meeting of the Society. To one who has made it a point, except when unavoidably detained, to attend those meetings, for a long series of years, I need not say that in the present condition of the Society, and with the interest which our annual meetings at present possess, the disappointment is severe.

I am unable at this time, to forward my annual report as Cor. Sec'y of the Society, from the fact that a considerable portion of the communications from our own state, designed for the Society, have not yet been received, and will be forwarded by individuals attending the annual meeting. A brief abstract of my proceedings however, for the past year, may not be without interest to yourself and the Society.

Acting under the instructions of the Board, I have made an effort to elicit information of value to our Society, from various sources, domestic and foreign. Out of about five hundred official letters written by me during the past year, about three hundred have been despatched to eminent agriculturists of this and other countries, to ascertain those important facts and principles in husbandry, which advancing experience, and scientific experiment, are continually developing and establishing.

Many communications of value, have been received in answer to my inquiries, from this and other states.

Communications have been received from France, England, Scotland and Ireland, and I have reason to think that others are now on their passage.

I have opened a correspondence with the U. S. Minister to Spain, by which I hope to be able to ascertain many facts of value, in relation to that unfortunate but interesting country, as well as the adjoining kingdom of Portugal.

I regret to say, that owing to the difficulty I experienced in obtaining the address of several eminent agriculturists in Germany, I was not enabled to address them in time to hope for an answer, prior to the present meeting. I therefore concluded to defer it, but it is my earnest hope that this important field of inquiry may be diligently and successfully explored by the corresponding officer of the Society for the ensuing year.

I have addressed communications to sources, supposed to be the proper ones, in South America, and the West India Islands, in relation to the cultivation and acclimation of certain plants, the successful culture of which would be a great desideratum to this and other states. My inquiries have not reached their destination, or have failed to secure the attention of those to whom they were directed, as no replies have been received to them.

I have the honor to be, respectfully, your ob't serv't.

HENRY S. RANDALL, *Cor. Sec'y.*

The Report of the Treasurer, E. P. PRENTICE, Esq. was then read. The receipts and disbursements of the Society for the last year, were as follows:

Balance on hand, Jan. 19, 1842, ...	969.36
Receipts during the year,.............	2,349.92
	$3,319.28
Payments for Premiums and expenses,.	1,475.36
	$1,843.92

The Treasurer estimates the sum now due by the Society for Premiums, &c. at about $450, leaving a balance of about $1400 in the treasury, after the payment of all demands against it.

On motion of Mr. COLMAN,

Resolved, That the Executive Committee, in the distribution of Premiums, be instructed, as far as they may deem it suitable, to give Dana's "Muck Manual," or Ruffin's "Essay on Calcareous Manures," as premiums, deeming the two works highly instructive, able, and useful, and a substantial benefaction to the Agricultural interest.

It having been intimated to the Society, that a room might be obtained for an Agricultural Museum, in the state building, in connection with the Geological Museum, it was, after a statement on the subject from Prof. EMMONS, resolved, that a committee be appointed to visit the rooms and confer with the State Geologists on the subject. Committee: Messrs. Nott, Prentice, and Sherwood.

On motion of Mr. ROTCH,

Resolved, That the Executive Committee be requested to call a meeting of breeders, at such time and place as they may deem proper, for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be attained in breeding.

The PRESIDENT of the Society, after stating that Mr. Colman, late Agricultural Commissioner of Massachusetts, had, at the suggestion of many distinguished friends of Agriculture, proposed a tour throughout Europe, for the purpose of obtaining exact and full information of the Agriculture of Europe, and of the condition of Agricultural Schools and Experimental Farms, offered the following resolutions, which were adopted unanimously:

Resolved, That the New-York State Agricultural Society regard with great interest, the proposition of HENRY COLMAN, Esq. to make an Agricultural Tour through some of the most highly cultivated portions of Europe, and anticipate from this distinguished writer and friend of Agriculture, a body of valuable information, which will impart a fresh impulse to agricultural improvement throughout our country.

Resolved, That the Society subscribe for —— copies, to be distributed as premiums.

On motion of Mr. SHERWOOD, the blank was filled with "one hundred," and the Treasurer was directed to subscribe for 100 copies.

On motion of Mr. NOTT, a committee of one from each county represented, was appointed to nominate officers of the Society for the ensuing year, and to report on the place for holding the next Fair, which committee consisted of the following gentlemen:

Mr. Hillhouse of Albany, Mr. Sherwood of Cayuga, Dr. Beekman of Columbia, Judge Van Bergen of Greene, Mr. Hungerford of Jefferson, Mr. Scovill of Lewis, Mr. Wadsworth of Livingston, Mr. Enos of Madison, Mr. Colman of Monroe, Mr. Vandeveer of Montgomery, Mr. Comstock of Oneida, Mr. Deniston of Orange, Mr. Miller of Oswego, Mr. Rotch of Otsego, Mr. Cory of Saratoga, Mr. Grove of Rensselaer, Mr. Duane of Schenectady, Mr. Leland of Steuben, Mr. Youngs of Queens, Mr. Halsey of Tompkins, and Mr. Sheffield of Wayne.

A bushel of very superior seed wheat, was sent to the Society for exhibition, by E. K. JAMES, Esq. of Poughkeepsie, accompanied by a letter, in which Mr. J. says:

"My wheat of last season yielded very indifferently, being completely flattened by a heavy rain and wind before it was ripe, and from which it never recovered. Three acres yielded only fifty bushels of the same quality as my sample, and four or five bushels of light shrunk grain. I have grown the same kind of wheat for the last ten years, and have invariably sold it for seed, for prices varying from $1.25 to $2.50 per bushel; my greatest crop, 27 bushels per acre; my lightest, 15 bushels. My soil varies—some fields a sandy loam, others a stiff clay. My general plan of culture—1st. Corn, well manured, say from 20 to 25 loads, (2 horse wagon,) of long manure—product from 50 to 65 bushels shelled corn per acre. 2d. Oats, product about 40 to 50 bushels per acre, 3d. Wheat, limed, about 20 to 30 bushels Barnegat *slacked* lime per acre; seed, 2 to 2½ bushels per acre, soaked in a pickle of salt or saltpetre, and rolled in lime or gypsum. The wheat was raised from half a bushel picked wheat, (by hand from a heap,) which was sown and produced 8½ bushels, which, sown again, yielded 125 bushels. Twice within the last ten years, I have started a new clean picked half bushel of seed wheat, and my present stock is from the third and last half bushel. I have done this, fearing my wheat might deteriorate."

Mr. BEMENT presented for exhibition, some samples of Dairy Salt, accompanied by the following communication:

To the Members of the N. Y. State Ag. Society:

GENTLEMEN—I herewith offer for your inspection and notice, two samples of salt, one in the crude state, the other as prepared for the dairy or table.

In a letter accompanying the boxes, the manufacturers say, "This article is manufactured from pure clarified coarse salt, which we order made expressly for drying, grinding and preparing for sale, and we think it is superior to any now in use. It only requires one box or a peck, to convince any one that it is decidedly better than the common bag, or even the Salina salt. The farmers in this vicinity, will not use any other, and say the butter salted with it keeps much longer and is decidedly better flavored than that salted with common salt."

A small bag of this salt was presented to me the day previous to the Fair of this Society in September last, by S. Chapin, Esq. formerly a member of this society, but now a resident of Massachusetts. Not knowing any thing of its qualities, I did not present it for exhibition; since then I have made use of it in salting butter, and can bear testimony to its excellence, and do not hesitate to say that I think it far superior for the dairy to any other kind I have ever used. It appears perfectly pure, very fine, white and clean; of course strong. In the Liverpool sack salt, many small, dark specks are found, which unavoidably find their way into the butter, and render the working it much more laborious.

After the butter is worked over, it appears completely dissolved and thoroughly incorporated, not a particle is to be found, as is the case with the Liverpool bag salt; and so far, the butter made in my dairy, in the early part of October last, is now just as sweet and fine flavored as when first made, and from my limited experience, I most cordially commend it to the favorable notice of the members of this society, and more particularly to the dairy farmers of this state.

The quality of salt used in making butter and cheese, is of more importance, in my humble opinion, than most persons are aware of; and in many cases, to this cause may be traced the failure of both articles.

It is prepared at South Hadley, Mass. by Messrs. Bardwell, Damon & Co., and sold for 31c. per peck, or 112c. per bushel. If in boxes, like the one exhibited, 8c. will be charged for the box in addition. It is also put up in bags containing from one peck to a bushel each.

Respectfully submitted, by

C. N. BEMENT.

On the report of the committee appointed for that purpose, the following gentlemen were unanimously elected officers of the Society for the ensuing year:

JAMES S. WADSWORTH, Livingston, *President.*

Vice Presidents.

1st dist., JAMES LENOX, New-York.
2d " ROBERT DENNISTON, Orange.
3d " ANTHONY VAN BERGEN, Greene.
4th " E. C. DELAVAN, Saratoga.
5th " JONATHAN D. LEDYARD, Madison.
6th " Z. A. LELAND, Steuben.
7th " J. M. SHERWOOD, Cayuga.
8th " L. B. LANGWORTHY, Monroe.

H. S. RANDALL, Cortland Village, *Cor. Secretary.*
LUTHER TUCKER, Albany, *Rec. Secretary.*
EZRA P. PRENTICE, Albany, *Treasurer.*

Additional Members of the Executive Committee.—C. N. Bement, Albany; H. D. Grove, Buskirk's Bridge; Alex. Walsh, Lansingburgh; J. McD. McIntyre, Albany; Thomas S. Hillhouse, Watervliet.

On the report of the same committee, it was

Resolved, That it be recommended to the Executive Committee to hold the next annual Fair of the Society, in the city of Rochester.

On motion of Mr. COLMAN,

Resolved, That the State Society respectfully petition the legislature, for as many copies as they may see fit to grant, of the Natural History of the State, now in course of publication, to be distributed in Premiums by the Executive Committee.

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* Several applications for the Premiums on Field Crops, have been received by the Rec. Secretary since the annual meeting of the Society.

A committee consisting of Messrs. Hungerford, Van Bergen, Prentice, Sherwood, and Tucker, was appointed for the object specified in the above resolution.

Several resolutions of much interest in relation to the objects of the Society, and the manner in which they could be best carried into effect, were introduced, and excited an animated and interesting discussion, in which the President, Messrs. Rotch, Nott, Leland, Colman, Grove, Walsh, Denniston, Van Bergen, Sherwood, Prentice, and others, took part; when the several resolutions were referred to the Executive Committee.

On motion of Mr. Colman,

Resolved, That the thanks of the Society be presented to the President, Secretaries and Treasurer of the Society, for the efficient and able manner in which they have discharged their duties during the past year.

On motion of Judge Van Bergen,

Resolved, That the thanks of this Society be presented to the Young Men's Association of Albany, for the use of their Lecture Room.

The Society then adjourned to meet at the Assembly Chamber, at 7 o'clock, P. M.

At 7 o'clock, the Society met in the Assembly Chamber, where a large audience were in attendance to hear the annual Address of the President.

On the conclusion of the Address, Vice President Denniston in the chair, the following resolution, on motion of Mr. Colman, was unanimously adopted:

Resolved, That the thanks of this Society, be presented to their President, James S. Wadsworth, Esq. for his interesting, instruetive, and useful Address, and that a committee be appointed to request a copy for the press. Messrs. Colman, Beekman, and Van Bergen, were appointed the committee.

MR. WADSWORTH'S ADDRESS,

Before the New-York State Agricultural Society, January 18, 1843.

Gentlemen:—In complying with the request of the Executive Committee of the Society, to address you upon its progress and prospects, I find the embarrassment, which, under any circumstances, would on my part attend the performance of this duty, greatly enhanced by the recollection that the task which now devolves upon me, was, on the occasion of our recent annual Fair, so happily and eloquently performed by the late distinguished chief magistrate of our state. I cannot but regard that event as one of the auspicious incidents in the history of our society. I trust that the appeal which we then listened to in behalf of the dignity and utility of our avocation, breathing as it did throughout, a high patriotism, and a deep solicitude for the objects which this society is intended to promote, was not lost upon any who had the happiness to hear it. I believe that few of us left the capitol on that occasion, without a higher sense of the importance of self-cultivation as well as agricultural progress, and a renewed determination to improve not only the farm, but the farmer.

The annual Fair of the Society, was indeed, in all its main incidents, deemed by its friends eminently successful. The large collection of those animals, the domestication of which seems so intimately connected with the prosperity of the human race, marked the progress of agricultural improvement, and the great concourse of observing spectators bore testimony to a widely diffused interest in the objects of the association.

A large portion of the improved breeds of farm stock known in this country, or in Europe. were represented on the occasion referred to, by animals of the highest order.

In the collection of Agricultural Implements and Domestic Manufactures, the exhibition was rich in the evidences of the ingenuity and skill of American mechanics.

In the distribution of premiums, the society called to its aid as far as possible, eminent agriculturists of other states, and it is gratifying to know their decisions were almost universally received with the deference due to their acknowledged competence and impartiality.

I find great pleasure, in referring to these indications that the society is, slowly perhaps, but certainly, accomplishing the objects for which it was established, and by the liberality of the legislature endowed. You will, gentlemen, have seen enough within your own observation, to satisfy you that your particular labors are not barren of the happiest results.

It may well add to the gratification, and to the hopeful anticipations with which we regard these evidences of progress, so unequivocal and so universal, that they are achieved in spite of the most depressing embarrassments.

The condition of the farming interests of our country, is indeed truly remarkable. The price of agricultural products has fallen to less than half the range of prices obtained during a period of years so long that they had come to be regarded as settled and permanent. Under this impression farms were bought, contracts made, improvements undertaken, habits of expenditure acquired, which, under the present range of prices, cause difficulties as extensive as they are in many cases unfortunately, irremediable.

Few of us are aware of the amount of individual suffering, the sacrifice of property accumulated by years of patient toil and frugality, the disappointment of honest hopes, of independence and comfort in advancing years, effected by this revolution in prices. It is no uncommon spectacle to see men now far advanced in life, who in their earlier years have been successful pioneers, compelled to abandon the comfortable homes and broad fields, which they have carved out of the wilderness, and seek again, amidst the hardships and privations of a forest life, the re covery of their fortunes.

If none had been swept away by this whirlwind, but those who sowed the storm, there would be slight ground for our sympathies; but unfortunately the cause was as universal and all powerful, as it was concealed and sinister.

It would be foreign to our present purpose to inquire into the origin, the history, and the remedy for these evils, and I fear that we could not enter upon the task without trespassing upon those political questions from which I hope this society will ever keep aloof.

The pain which these wide spread disasters must inflict upon every philanthropic mind, will be greatly relieved by the fact that they are so universally met in the right spirit. Renewed industry and greater economy, are every where the order of the day. But the fact to which I wish especially to invite your attention, as the advocates of agricultural improvement, is that it has not escaped the reflection of the great body of farmers, that the best way to encounter low prices is by improved cultivation. New agricultural implements, new modes of cultivation, improved breeds of farm stock, were never more readily adopted than at this moment of extreme depression of the agricultural interests. There is in fact, every where depression, but no where apathy. We meet in every direction the most serious difficulties, the most extensive embarrassments, but we find too—thanks to the influence of our free institutions, and the acknowledged energy of our race, every where at work, the perseverance, the patience, and the versatility of expedient, before which all obstacles of *human creation* must give way. Such emphatically, are the difficulties with which we have to contend. They are the work of men's hands. They come not from the great Dispenser of good and and evil, for never were the bounties of Providence more marked in our country than at this moment. Our harvests have been almost universally abundant. Pestilence and famine are no where to be found.

We may thus rely with a well grounded confidence upon the energy of a people at once educated and laborious, to overcome embarrassments which now so severely oppress the whole community. If we turn to the condition of other civilized nations, we shall find that in the comparison, we have rather cause for self-congratulation than despondency. Widely different is the situation of that people, where the wages of labor are so high, that the capitalist finds it difficult to procure an adequate return for his investments, and the situation of a nation in which the wages of labor are so low, that the laborer finds it difficult to supply the daily requirements of his half clothed, half fed family.

What are all the pecuniary difficulties so universally felt here, compared with the sufferings of a people of which no small proportion close the toils of the day with barely enough to supply its wants, and without knowing where, in case of sickness or loss of employment, they are to find the food which will keep them alive the next forty-eight hours ?

I do not point to these comparisons to gratify the impulses of national vanity, but to show how much more ground we have for renewed and hopeful effort, than for that despondency wich seldom seizes but upon feeble uncultivated intellects.

We have, gentlemen, other reasons for confidence in the future; even for the most sanguine anticipations of the developments of coming years.

The application of science, the most profound which has yet been attained by the far reaching efforts of the human mind, to all the products of our industry, to the soil, the crop, the animal, has been reserved for the age in which we live. It is not claiming too much, to say that more progress has been made in this direction within the last twenty years than in any previous century. Our own countrymen, it is gratifying to perceive, are securing their share of this abundant harvest. Our chemists and geologists will not, we may be sure, rest contented as industrious gleaners after the Davies, Liebigs and Johnstons of other countries, but will push forward into the ample domains, which even those accute discoverers have not penetrated.

From the origin of our race almost to the present time, the path of the husbandman has been clouded in darkness and doubt. From the sowing of the seed to the gathering of the harvest, mystery attended every step. The first link in the great chain of cause and effect was hidden in uncertainty. The precepts of tradition, the result of a multitude of experiments, were founded mostly in wisdom; but they were as inexplicable as they were sound. Not so now. The scientific analysis of soils, of manures, and of vegetable products, explains not only the workings of nature and the practices of art, but opens an inexhaustible field of new combinations and novel results. To spread far and wide this new light in the galaxy of human knowledge, is one of the objects,—I think it will be conceded to be the first object of this association.

I will not attempt to enforce by any argument or illustration of mine, the high importance of this trust. If other nations in the vigor of maturity, with more leisure and more means than we possess, have out-stripped us in the race of philosophical discovery, let it be *our* boast, that we have spread these discoveries *wider*, and made them at once available by making them part of the current knowledge of the nation. Let it be our first aim to diffuse knowledge, where the constitution has rightly given power, to the whole people.

It is not, gentlemen, the sole object of our Society, to reward those who bring to our Fairs the finest animals, or to remunerate those who, with skill and industry, raise the best crops. These are but the means, and part of the means, by which it is hoped to achieve higher and wider ends. We wish, by association, by comparison of ideas, and by a generous emulation, to diffuse among ourselves and the mass of the agricultural community the results of experience, the lights of science, and the productions of art.

Of the incalculable power, for good and evil, of association and combined effort, the present age abounds in illustrations. That this great element of man's power has often been wielded to trample upon the equal rights, the peace and happiness of society, cannot be denied. Of the many instances in which, with widely different and higher aims, it has effected the noblest achievments, I shall only refer to one. With what language can we describe, with what powers of calculation estimate the wide spread good accomplished, the deep misery warded off, by temperance associations ? What individual, wielding even a despot's sceptre—what government, monarchial or democratic—what law—what armed force, could have achieved the great results brought about in our day, within our own observation, by these efforts ? With this signal illustration before us, we can not lack confidence in any efforts wisely directed to a good end. With motives which cannot be impeached, with objects which can no where be condemned, asking no special privileges, requiring no exclusive immunities, seeking only to elevate and render more effective that labor from which man is destined never to be exempt, we may surely here, if any where, call to our aid the great power of association and combination. With this element of strength we wish to awaken the public mind to a sense of the importance of our avocation, and to dispel whatever may be left of that ancient prejudice, that the tiller of the soil is the drudge of the human race.

It is strange that it should have been overlooked, even in the darkest days of despotism and ignorance and superstition, that he who sows the seed and reaps the harvest, works not only with the plow and with the hoe and with the scythe, but that he wields, far beyond the laborer in any other branch of industry or art, the elements and powers of nature. There is certainly no pursuit in which so many of the laws of nature must be consulted and understood, as in the cultivation of the earth. Every change of the season, every change even of the winds, every fall of rain, must affect some of the manifold operations of the farmer. In the improvement of our various domestic animals, some of the most abstruse principles of physiology must be consulted.

Is it to be supposed that men thus called upon to study, or to observe the laws of nature, and labor in conjunction with its powers, require less of the light of the highest science, than the merchant or manufacturer ? Or is it to be believed, that men who go weekly, almost daily, to different occupations, changing with the almost unceasing changes of the seasons, and whose business is to bring to maturity such a multiplicity of products, exercise less the highest intellectual faculties of man, than the laborer who, day after day, and year after year, follows the unchanging manipulations of art ?

Happily for the interests of the farmer, the history of our country abounds in evidence that this great misconception of the nature and tendency of agricultural labor, no longer exists. I can not, gentlemen, allow this occasion to pass without referring to a recent event, which, with whatever diversities of opinion we may regard the great political questions which agitate our country, we, as farmers, cannot dwell upon without emotions of pride and pleasure. When the people of a great state, which, in population, in wealth, in power, if it had not voluntarily surrendered its immunities, might stand up among the independent empires of the earth, without fear and without reproach—of a state, which, in achievments of industry, of genius, of enterprise, we may search the history of the world, and search in vain for a rival—when the people of such a state turn to the ranks of its practical farmers for the unimpeachable integrity, the enlightened wisdom requisite to administer their highest trust, we may well claim that agricultural labor is not inconsistent with the highest intellectual cultivation and moral power.

It is not alone in the brilliant results of scientific investigation, nor in the fertility of the soil, nor in the general salubrity of the climate, that the American farmer finds the ground of his brightest anticipations for the future. There are other and higher elements in the composition of his fate. The government which watches over him is the government of his choice—a government in which the permanent interests of the great mass of the people are secured by placing the power in their own hands. Under such institutions the pendulum of public justice may sometimes vibrate between dangerous extremes, but it must eventually repose where justice and the interests of the many, require that it should rest. Such are the hopes of the farmers of our country. It is not to be denied that their interests have been sometimes neglected, and their rights sacrificed to the sinister aspirations of classes more favorably situated for political combinations; but if there is any foundation for our faith, that a free government is the fountain of equal justice, their abberrations must be corrected in the slow but certain progress of truth and right.

I trust that American agriculture will illustrate and confirm the striking remark of the author of the "Esprit des Lois," a writer, the most philosophical and liberal of his time, " that it is not those countries which possess the greatest fertility, which are the best cultivated, but those which have secured the most liberty." I find this suggestion so flattering to our hopes, eloquently commented upon by a late distinguished agriculturist of our country, in an address which he delivered before the Agricultural Society of Pennsylvania, and I gladly avail myself of this opportunity to pay to his memory a tribute of respect,which is due, in a more eminent degree, to but one other name in the history of American farmers and patriots. With many other improvements in agriculture, Judge Peters was emphatically the author of the plaster and clover culture. The time which your patience will allow me to occupy on this occasion, will not permit me to recount the many experiments, at once ingenious and philosophical, with which he demonstrated the wonderful efficacy of plaster,nor the efforts, equally persevering and philanthropic,with which he labored to introduce into general practice, this great fertilizer. He succeeded. None but those well acquainted with the course of husbandry in our wheat growing districts, can estimate how much of the eighty-four millions annually produced in our country, is owing to the introduction of plaster and clover. The benefits of this improvement are to be counted by annual millions; and I call it up to your attention, not only to pay the debt of gratitude due to its distinguished author, but as an incentive to those who, with the better instruments of a more advanced science, have the same field of practical improvement before them. It is happily the nature of human knowledge that the more it achieves, the larger is the field of achievement. As the outer circle of invention and discovery is pushed farther and farther from the center, the more numerous and of a higher order are the objects which present themselves to the investigation of those whose lofty ambition it is to add something to the mass of human attainment.

The Society has endeavored to contribute something to this onward movement by offering prizes for essays upon the application of science to agriculture. I trust that the result will vindicate the wisdom of this policy, and lead to its continuance.

In this country, with just laws, justly administered, where the popular voice can promptly correct every oppressive enactment, where, with common schools and an untrammeled press, knowledge circulates as freely almost, as the air we breathe, it would be surprising, and not less discreditable than surprising, if agricultural improvement did not keep pace with the progress of the country in every other respect. For one, I have no fears on this point; I believe that our progress, with or without Agricultural Societies—though always greatly accelerated by them—is to be decided and rapid. I am not however, unaware, nor should we ever lose sight of the fact, that agriculture, like learning, has had its dark ages. It has risen to great perfection, receded, and rested for centuries without any apparent improvement. The history of the world abounds with evidence that the cultivation of the earth was at an early day carried to a high point.

In China, it is well known that for uncounted centuries a degree of skill has been exhibited in the preparation and application of chemical and vegetable manures that is not, even now, equaled in any part of christendom. A recent popular writer counts it as not the least valuable result which may flow from the opium war, as it is properly designated, and which it is to be hoped for the honor of humanity, is now terminated, that by opening a more general communication with that extraordinary people, we may learn something of their agricultural skill. The Chinese are not the only people beyond the pale of Christianity and modern civilization, who have attained a remarkable degree of skill in certain branches of husbandry. The aborigines of South America and Mexico practiced irrigation upon a scale, and with a perfection of detail, not surpassed in any modern improvements. The Spaniards, superior to them in the art of war, overcame them in battle, but have not equaled them in skillful and industrious tillage.

Throughout all those immense regions of British India, where the indomitable perseverance and courage of the Anglo-Saxons have subjected millions to the control of thousands, the conqueror has learned more tban he has been able to impart of practical wisdom directed to the cultivation of the soil. A high cultivation, accompanied by the use of irrigation and mineral and vegetable applications, has there carried the productive powers of the earth to a point never yet attained in those parts of the globe claiming to be more enlightened.

In ancient Egypt, the results were, if possible, more extraordinary. There, not only agricultural productions, but the imperishable monuments of art, surpass even the comprehension of modern science.

Coming down to the early days of the Christian era, we find the Roman writers abounding in sound precepts and suggestions, which even now might be adopted with advantage. Nearly the whole of Varro might be read with profit by our modern farmers. True, it is often tinged with a superstition now happily discarded, and relates to a state of society and government, widely differing from our free institutions.

But in all that relates to tillage, to the preparation and application of manures, his suggestions accord with the views of our best modern practical farmers. In the classification of mineral and vegetable manures, such as lime, marl, and many varieties of compost, he gives to each the relative value which has been affixed by the most profound chemical analysis.

If it is somewhat discouraging to look back and find ourselves but little in advance of the remotest times, in many departments of our profession, we may at least congratulate ourselves that we live in an age when agriculture is in the ascendant. It is no longer given up to serfs and slaves, as the fitting occupation of the most ignorant portions of the community. It now takes its rank among the honorable and elevating pursuits of industry. To follow the plow and tend the flock is no longer, here at least, the mark of ignorance and servitude, as under a false and despotic system it was, and in some parts of the globe still is. In this, we stand upon ground which the ancients never attained. It is the great achievement of modern times. The rights of man and the dignity of labor are vindicated; the one follows from the other. Agricultural improvement then rests upon a foundation on which it never stood before. It is sustained by free institutions; it is the result of laws, wise, because liberal. The enfranchisement of the many, the elevation of the masses, must go hand in hand with the intelligent, industrious and prosperous cultivation of the earth. If agriculture owes much to the benign influence of our institutions, liberty owes not less to agriculture.

Where do we look for the calm discretion, the disinterested patriotism, which must sustain a representative government, but to the great community of cultivators of the earth? Even those most skeptical as to the fitness of man for self-government, admit that if the experiment ever succeeds, it will be in a nation of farmers. The experiment, thank Heaven, has succeeded; it has succeeded in a nation of farmers; and while we must not be guilty of the illiberality of doubting that the great manufacturing nations of other continents may be fitted to administer the high duties of freemen, it becomes us to cherish a profession which, more than any other, prepares man to receive the highest blessing of his race in this world—a free government. We must cherish it by industry, by virtue, by intellectual cultivation; by connecting it with science and the arts, and with everything which can elevate and adorn it. If we do our duty by ourselves and our children, agriculture will never again, it is to be hoped, know the dark ages in which for so many centuries it slept with liberty and learning. Let us do our duty in the responsible station and happy era in which Providence has cast our destiny, and I trust the day is far, far distant, when we shall cease to be a nation of farmers and a nation of freemen.

GEOLOGICAL SURVEY OF NEW-YORK.—Part III.

In our last, we briefly noticed the reception of Parts II. and III. of the great work now in progress under the patronage of the State; Part III. embracing Mr. Vanuxem's Report of the 3d Geological District. We have had time to examine it with attention, and shall give a brief notice of the system pursued by the Professor, and its results, as shown in the volume before us. The Report includes the survey of the counties of Montgomery, Fulton, Herkimer, Otsego, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Cortland, Chenango, Broome, Tioga, and the eastern half of Tompkins, these composing the 3d Geological district, and constituting, as will be seen at a glance, one of the most interesting portions of the state.

"In this Report, the term *New-York System* will be used, and will include all from the Potsdam sandstone, inclusive, to the coal formation." The following, gives a tabular view of the N. Y. System in the ascending order, embracing the general divisions, which are purely geographic, and the several groups or classes of rocks in rising from the Potsdam, or in other words, the primitive rocks of this district, to the Catskill or old red sandstone group, being the one the highest in the N. Y. System, and lying immediately below the coal formation of Pennsylvania:

New-York System.	Champlain Division.	Potsdam sandstone, Calciferous group, Black River limestone, Trenton limestone, Utica slate, Hudson River group.
	Ontario Division.	Gray sandstone, Medina sandstone, Oneida conglomerate, Clinton group, Niagara group.
	Helderberg Division.	Onondaga salt group, Waterlime group, Pentamerus limestone, Catskill shaly limestone, Oriskany sandstone, Canda-galla grit, Scoharie grit, Onondaga limestone, Corniferous limestone.
	Erie Division.	Marcellus shales, Hamilton group, Tully limestone, Genesee slate, Portage group, Ithaca group, Chemung group.
	Catskill group.	

With the above important and convenient arrangement, the whole of the rocks and other geological products of the 3d district will be reduced to a few simple heads, namely four systems and seven divisions, as in the following table:

" 1. Primary System, requires no further illustration.	
2. Taconic System,	Embraces the products between the primary and the Potsdam sandstone, which are very partial in this district.
3. New-York System,	1. Champlain division. 2. Ontario division. 3. Helderberg division. 4. Erie division. 5. Catskill division.
4. Quaternary System,	1. Transported materials. 2. Local materials."

It is to be presumed that the arrangement and classification here adopted, will be that of the other parts of the survey, so far as they are applicable; and thus tbe Geology of the several districts be wrought into a beautiful and harmonious whole. It may well be questioned whether there is another country on the globe so well situated for an investigation of all the rocks between the primitive and the coal, as New-York. Nearly the whole of the Mississippi valley, large portions of Tennessee, Virginia, Kentucky, Pennsylvania, &c. are of the same formations, and when the New-York systems are fully elucidated, those of the other states will also be explained.

The Primary rocks have comparatively little influence in the 3d district. They appear in the north parts of Montgomery and Herkimer, and the east part of Lewis, and in the valley of the Mohawk in the shape of uplifts, as at the Noses, and the Little Falls. They constitute parts of the great central nucleus of the 2d District, of which Mt. Marcy is the most elevated point.

With the Transition rocks which overlie or rather lean upon the primary, a new era commences. " As the primary class is distinguished for its crystaline products, being pre-eminently the domain of *crystalization*, showing that solution reigned universally, a new element is here introduced, that of *life*, giving rise to an important class of characters, whose full development, as in man, forms no part of any of the past known geological eras." We shall briefly notice each group in the ascending order adopted by Prof. Vanuxem.

Potsdam Sandstone.—This rock, in the second district, is an important one for thickness, extent, and economical purposes. In New Jersey and Pennsylvania, it is found occupying the same position as in this state. In the 3d district, this rock is limited to a few points chiefly in the N. E. part of Lewis co., and at the uplifts of the Noses, and the Little Falls on the Mohawk. No organic remains have been found in this rock, with the exception of the Lingula at Keeseville; thus showing that this fossil is one of the oldest yet known, and as the genus is also recent, it proves that it has existed through all the ages of known organic existence.

Calciferous Group. (*Transition sandrock of Eaton.*)—This group is entirely confined in this district, to the counties of Montgomery, Herkimer, Oneida, and Lewis. Fossils are rare in this rock, but there are some fucoidal layers peculiar to this rock. One of its most remarkable products is its beautiful quartz crystals, which are most abundant at the Noses, Little Falls, and Middleville. Anthracite is often found in connection with these crystals, and sometimes within them. The fossils found, were an *ophileta* and an orthocera, remarkable as being the oldest fossils found in the 3d district.

Black River Limestone. (*Mohawk limestone, Transition limerock of Eaton.*)—This rock forms the remarkable cliff of limestone which extends along the Black River from Boonsville through Lewis, into Jefferson co. It is found in a variety of places on the Mohawk, as at the quarries near Amsterdam, and it also forms the base of the Trenton limestone. It is an important rock, exercising a decided influence on agriculture, particularly in the counties of Lewis and Jefferson. The difference between the influence of the primary and transition rocks on soils, is strikingly seen in the Black River valley, below Boonville; on the left, the successive ranges of uplands are settled to their summits, while on the right, the primitive rocks approach the river, and are still covered with their dense and primeval forests. This rock is one of the most valuable for building purposes, and for lime, found in the Mohawk valley, and numerous quarries are extensively worked.

Trenton Limestone. (*Metalliferous limerock of Eaton.*)—The best exposition of this rock, is at the Falls on West Canada Creek, near Trenton. This rock is well characterized, both by its fossils and otherwise. Some of the fossils, such as the *Strophema deltoidea*, are not found out of this rock, and as they are abundant in this, give it great value as a point of comparison for distant localities. The *Favosites lycopoclites*, so called from its resemblance to the puff ball fungus; and the trilobite, *Isotelas gigas*, are also characteristic of this rock. This rock is entirely confined to the counties of Montgomery, Herkimer, Oneida, and Lewis. Towards the northern part of Lewis, its thickness is not less than 300 feet. The cliff at Frankfort, Kentucky, and the bluff at Nashville, Tennessee, are of Trenton limestone. The Trenton limestone extends without interruption, from the East Canada creek to the St. Lawrence, and is important for its geological character, and its agricultural and economical uses.

Utica Slate. (*Metalliferous Greywacke of Eaton.*)—" The Utica slate contains no fragments whatever of other rocks. It is the same material mineralogically, which separates the dark colored layers of the Trenton limestone." With this rock, the greater part of the fossils so abundant in the Trenton limestones, ceased; although a few are common to both, and some exist only in the lower part of the slate. Two fossils here make their appearance, not found in any lower position. *Beck's triarthus*, and the *Dentated graptolite*. The city of Utica is built on this slate, and the creeks near the city furnish the best places for its examination. Sulphurets of lead, iron and zinc, have been found in this rock.

Hudson River Group. (*Frankfort slate of the Reports.*)—This rock or group, embraces the Frankfort slates and sandstones, and the sandstone shales of Pulaski. It rests upon the Utica slate throughout the district. In Schoharie co. this group is undisturbed, and its thickness not less than 700 feet. This is an important rock in all parts of the world; is the source of the springs of Saratoga and Ballston, the springs produced by boring, as at Albany and Hampton; and is the lowest rock from which salt has been manufactured from brine, in the state, or in which brine springs are found. In this district, this group only shows itself in the counties of Montgomery, Herkimer, Oneida, and Lewis. The upper part of this group consists of the Pulaski slates and shales in Oswego co., and is the only rock to be seen at

Pulaski and the vicinity. The fossils *Pterinea carinata*, *Cyrtolites ornatus*, and *Pentacrinites hamptonii*, as well as some others, are characteristic of the Hudson River group.

Grey Sandstone of Oswego.—This sandstone is the next mass to the sandstone shale of Pulaski, but it wants the fossils of the latter. It is of considerable thickness, forming the Falls of Salmon and Mad rivers, and it appears in the Mohawk valley, at Woodruff's quarry, near Rome. This rock is almost destitute of fossils. It forms the bed of the river, and the shores of the lake at Oswego.

Medina Sandstone. (*Red sandstone, Niagara sandstone of the Reports.*)—No well defined line separates this sandstone from the one below, or the grey sandstone, the color of the red sandstones frequently penetrating some of the layers below. This rock has the singular fossil called the *Fucoides Harlani*, and in no other part of the New-York System has it been seen. This fossil marks this rock in Pennsylvania and Virginia, and shows the value of fossils in determining the character of rocks. This rock is generally of a brownish red, and is found in Oneida, Oswego, and Cayuga counties. This rock forms the banks and the falls of the Oswego river, at Fulton. It forms the shore of the lake east and west of Sodus Bay, and underlies a large part of Oswego co.

Oneida Conglomerate. (*Millstone grit of Eaton; Grey Band of Rochester.*)—This is the oldest distinct conglomerate rock or mass of the 3d district. It is the same as the Shawangunk conglomerate, and is composed of quartz pebbles and quartz sand, firmly cemented. Its position is better defined in Oneida, than elsewhere, hence its name. Some of the layers are five or six feet thick. It has few fossils, though stems of fucoids traverse some of the layers. In some places, this shows a wearing from water, and some obscure scratches.

Clinton Group. (*Ferriferous sandrock of Eaton.*)—The Clinton group forms the lower part of the Protean group of the Reports, the upper part forming the Niagara group of this volume. It is well marked by its beds of iron ore and its marine plants; extends east and west through the district; in Herkimer and Oneida, being south of the canal, but in Madison, Onondaga, and Cayuga, to the north of it. This group runs out to the east before reaching Scoharie co. as there the Onondaga salt group and the Frankfort slate, are so near each other as to preclude any other formation. Near Utica, this rock is extensively quarried for building, and the iron ore strata are between the upper and lower layers of sandstone. It is interesting, as furnishing in its prolongation to the west, the ore for the Taberg, Constantia, Lennox, and Wolcott furnaces. In the rocks of this group, the *Atrypa affinis* is found, the lowest point at which any of the species of this peculiar division of the Atrypa appear.

Niagara Group. (*Lockport group; Geodiferous Limerock of Eaton.*)—This rock is very thick in the western part of the state, forming the lime rocks of Niagara, Lockport, Rochester, but thins out to the east of Onondaga county, and leaves not a trace as far east as the village of Mohawk in Herkimer co. This rock extends to the Mississippi, and is the same stone in which the mines of Dubuque and Galena are found. There is a limestone slate of considerable thickness, underlying this rock at Niagara, Rochester, &c. but which is seen but a short distance in the 3d district. This group of rock furnishes abundance of the best building stone, and is extensively burned for lime. The upper surface of this rock has excited great attention from its polished and grooved surface, it being the first of the series in which this remarkable phenomena has been observed to any extent. That it is different from a mere water-worn surface, it is believed none will deny, who have seen this rock in place, and carefully noted its appearance.

Onondaga Salt Group. (*Second Greywacke of Eaton.*)—This is one of the most important groups of rock in the state, furnishing as it does the brines of Onondaga and Cayuga, and embracing all the gypsum masses of Western New-York. This group is composed, 1st, of the red shale with green spots resting on the Niagara limestone; 2, alternate ranges of green and red shales; 3, two ranges of plaster beds with the hopper shaped rocks, and the vermicular or lime rock; and 4, the upper mass with cavities formed by sulphate of magnesia. These several masses are well represented by a woodcut in the Report. This group commences near the Hudson river, appears in the north part of Otsego co. makes its appearance by the side of the Erie canal at the east end of Madison co. The whole of the deposits named above, are best seen between Oneida creek and the Cayuga lake. Their greatest thickness is in Onondaga county. No gypsum in quantity is found east of Vernon; and very little as far as this point, while to the west it extends to the west line of the state, and across Canada into Michigan. Among the various products of this group of rocks which appear in the vicinity of Syracuse, is a well characterized serpentine, or metamorphic rock of the Report. It is on the street north of the canal, a little east of the village on the side hill, and shows itself for a number of rods. Such rocks have usually been attributed to volcanic agency, but there is no evidence of such a state of things having ever existed here. "All that is required," says Prof. Vanuxem, "is the presence of the elements of the products observed at Syracuse, and in a state admitting of solution and moisture, to which every degree of heat added would greatly aid their mutual action upon each other; and from solution, crystalization would take place, and thus metamorphic products or rocks would be formed, no igneous action commonly so called being requisite, but a thermal one only."

But by far the most important product of this group is the salt springs of Salina and Montezuma, which are capable of furnishing any desired quantity of salt annually, and from which three millions of bushels per year, are now made. One of the most important questions connected with the economical use of these springs is the existence or non-existence of rock salt in the vicinity in an accessible form. That rock salt has existed in this formation does not admit of a doubt; the hopper shaped crystalizations prove this. All the borings that have hitherto been made, håve been conducted on the supposition that the beds of fossil salt underlie the plain of Salina, or the lake itself. One of these continued to the depth of 600 feet, passed through part of the second deposit and the whole of the first, ending in the limestone of the Niagara group. The various explanations that have been made, prove that a deep excavation has been made in the first and second deposits in the elevation of the Onondaga valley, which has been wholly filled up, with the exception of the shallow basin now occupied by the Onondaga lake. The deepest boring made in the mass of rolled stones and sand is about 270 feet, during the whole of which the water continued to increase in strength; and the repeated borings that have been made from that, the springs of Syracuse, Salina, Geddes, and Liverpool, have the same origin in this excavation, which must operate both as a drain and reservoir. If water at, or near the point of saturation could be reached, it would be more valuable than ordinary rock salt, as this usually requires solution to free it from its impurities. The real character and extent of this excavation, is one of the most important geological problems yet to be solved in the state, and the most interesting, so far as the great product of salt is concerned. A knowledge of the structure of the district, the dip of the rocks, and the greater development of the series at this point seems to render it certain that the real source of the brine springs is farther up the valley, and that borings for rock salt, to be successful must be made at points farther to the south, and higher in the series of rock than has yet been attempted. The deep excavations made in the Marcellus and Hamilton shales, and now occupied by the remarkable chain of lakes in the 3d and 4th districts, are similar, with the exception of the filling up, to the one now occupied by the brines in the red shale of the salt group.

[To be continued.]

CULTURE OF THE PEA.

This valuable crop has been unusually productive the past year, and will to a considerable extent supply the place of the corn crop, which in many parts of the country has proved a partial failure. This illustrates the old remark that corn and peas rarely succeed well in the same season. The author of the "British Husbandry," remarks that "few things can be more uncertain than the produce of the grain, which seems entirely dependent upon circumstances regarding the state of the atmosphere at the time of blossoming, and with the precise nature of which we are unacquainted. In dripping or wet seasons, which are favorable to their growth, so much as 84 bushels of Marlborongh grey peas have been got from a single acre, though on good soils and favorable season, 30 bushels is considered a fair crop."

To the great moisture, and consequent coolness of the past season, we may doubtless attribute the excellence of the pea crop, which in several instances has far exceeded all that we have ever before known in this country. A young farming friend of ours had a crop that good judges estimated at 60 bushels per acre, but which unfortunately, in spite of every exertion to save it, was so damaged and wasted by the storms and long continued wet weather of September, all accuracy as regards the quantity was out of the question. The ground was in corn the year before, and heavily manured. It was plowed in the fall, once in the spring, sowed to peas of the Marrowfat kind, and well rolled.

But the greatest crop we believe on record, is the one grown by Mr. Wasson, of Leicester, Livingston co., as given in the N. G. Farmer of November. They were of the kind called the short pod English pea, sowed on ground used for corn two years previous, soil black and mucky, three bushels of seed to the acre, and the quantity grown on one acre, measured at the time of threshing, was 88 bushels and 8 quarts.

The pea, like corn, delights in a rich deep soil, as in these it suffers less from drouth than on any other; and on such it is valuable as preparatory for wheat, a good crop smothering all weeds, and leaving the soil clean and in good condition. There is little use in attempting to grow the pea on poor or unmanured soils,and those who, on such soils as these, follow the pea with wheat, are apt to have their labor for their pains. Peas, with corn or roots, form a good part in any rotation; manure operating favorably upon them, and they leaving the soil for a grain crop unexhausted.

RICE—ITS CULTURE, &c.

We are gratified to learn that the attempts which have been made to introduce the rice culture into Louisiana, have been eminently successful, and that the rice crop of that state, will the present year, be by no means inconsiderable. There are large quantities of low lands in that state, that have been hitherto deemed of no value, as their half submerged state prohibited other crops, which will now be devoted to rice, and thus add to the means of export and subsistence in the states. In a late number of the London Farmers' Magazine, is a reply to some inquiries as to the value of rice for feeding pigs, in which the writer says—"I and my friend, purchased from the Government stores, several tons of damaged rice, at a cheap rate, and with this we fattened a lot of pigs; and such pork I never saw, either before or since. The fat, instead of being loose and porous,as it frequently is, was as firm and as solid as the lean, and the flavor of the meat wás altogether superior. The way in which the rice was prepared was this. My copper held 40 gallons. In the afternoon this was filled, or nearly so, with water; as soon as the water boiled, the fire was raked out, and two pails full of rice shot in; the whole was then closely covered down, and left till the morning. On the following day the copper was emptied of its contents, which consisted of a thick jelly, which could only be taken out with a shovel. With this the pigs were fed, and the effect was what I have stated above."

It is not an uncommon thing that rice becomes damaged and unfit for human food, and considerable quantities have been thrown away, that it is probable might have been advantageously used in feeding pigs.

IMPROVEMENT IN WHEAT.

The name of Gen. **Harmon**, of Wheatland, Monroe co. promises to become as honorably connected with the improvement of the great staple article of food in this country, wheat, as has that of Le Couteur with the progress of wheat culture in England. The business could not have fallen into better hands. Possessed of ample means, his soils admirably adapted to wheat, and in the very center of the best wheat district of the states, with a fund of information on the subject, gained from experience and from books, and with a patience and perseverance which enables him to pursue any course of inquiry to its final result, General Harmon is the man to enter upon and carry out such improvements in the culture of wheat, as circumstances may suggest.

General Harmon's principal crop is of the variety he calls the Improved Flint, which had its origin in the common *white flint* wheat, introduced into Western New-York not far from 1820. This wheat is so well known as to need no description. It is hardy, not very liable to rust, never shells in gathering, and weighs well. The most serious objection formerly made to this wheat was the difficulty of threshing it by hand, a difficulty done away by the introduction of the threshing machine. On favorable soils its yield is from 20 to 25 bushels per acre. By careful cultivation and selection, and not allowing any other kinds to come in contact with this wheat, either in the field or the granary, General Harmon has brought the *Improved Flint* to a purity and uniformity of quality, we have never seen equaled. This wheat is much sought after for seed, and much the greater portion of his crop is always used for this purpose. The advance he makes on the price, over ordinary wheats, is a reasonable, not extravagant one, and his sales are consequently extensive. We had the pleasure of seeing at the house of a farming friend of ours in Onondaga co. last fall, 20 barrels of this wheat he had just procured for seed, and a beautiful sample it was, as all who have examined the specimens produced by General Harmon at the State Agricultural Fairs will readily believe.

Gen. Harmon is experimenting with a variety of other wheats, some of which have been lately introduced into this country from abroad, and others are kinds which have long been known to our wheat growers. Among these are the Kentucky white bearded, more commonly known as the Canada Flint, a valuable wheat, the berry plump, white and heavy; the old Genesee Red Chaff, grown since the first settlement of the country, and were it not for its liability to rust and blight, would be one of the best wheats in the state. Some of the heaviest crops of wheat ever grown in the United States, were of this variety; 40 acres of it have been known to average more than 60 bushels to the acre. The Wheatland Red wheat is a variety originated by Gen. Harmon, and promises to be a valuable sort, ripening early, and producing a fine berry. He also cultivates the Virginia May, long a great favorite in the south; the Talavera Wheat from England; the English Flint, much resembling the old Genesee Red Wheat; with other varieties not necessary to enumerate.

In sowing wheat, Gen. Harmon pursues the course long since recommended in the Genesee Farmer and in the Cultivator, of thoroughly washing in brine, and drying with a quart of quick lime to a bushel of the seed. We have never known a crop of wheat damaged by smut where this method was faithfully practiced, and very few escape without some smut, where it is not. We can recommend from our own experience, the benefits of a change of seed, and with us that change has been most beneficial when the seed has been brought from oak lands, and which contain less vegetable matter than is usually found on those of beech or maple. Gen. Harmon prefers cutting wheat as soon as it is well out of the milk, or when the berry will yield to the pressure of the thumb and finger easily. His experience in this respect, agrees with that of our English correspondent, Mr. Hannam. The almost perfect exemption of Gen. Harmon's crops from cockle, chess, &c. is doubtless one great reason why his wheats are so much prized for seed. By perseverance he has eradicated all such matters from his soils, and as in his hands wheat never turns to chess, &c. his crops are consequently clean. In this respect, as well as in the care and success with which he produces wheat, he has set an excellent example to American farmers, and for his labors he deserves and will doubtless receive an ample reward.

DR. PLAYFAIR'S LECTURE.

GRAZING AND FATTENING CATTLE.

AT the request of the Royal Agricultural Society of England, Dr. LYON PLAYFAIR recently delivered two lectures before that society, on the application of the principles of physiology to the grazing and fattening of cattle. By the kindness of our friends in London, we have been favored with reports of these lectures. The first was delivered on the 7th December, and we doubt whether we can occupy a page to better advantage than by giving this lecture to our readers:

Dr. Playfair stated that the object of the lecture was to point out in what manner the principles of physiology, especially those which had been lately developed by the chemical researches of Liebig, might be applied to the grazing and fattening of cattle. In the first place, he should endeavor to give a clear conception of what the principles of physiology were, that were involved in the feeding and growth of animals. Vegetables, in their growth, derive all their food from the mineral kingdom, principally from the air, which had been called a gaseous mineral; whilst animals derived their principal nutriment directly from the vegetable kingdom. Vegetables effected many chemical changes in the food they took up, animals few. Gluten and albumen are the nutrient principles of plants, and in chemical composition they are identical with the albumen of the white of an egg, of the muscle of an ox, or the blood of a sheep. By identity was not meant similarity, but positively the same thing. The albumen of blood, of muscle, and of an egg differed in physical but not in chemical characters. The composition of these substances, as analysed by various chemists from the animal and vegetable kingdom, as seen in the following table, prove their identity:

	Gluten. Boussingault.	Casein. Scherer.	Albumen. Jones.	Ox-blood. Playfair.	Ox-flesh. Playfair.
Carbon,	54·2	54·1	5·5	54·19	54·12
Hydrogen,	7·5	7·1	7·	7·5	7·89
Nitrogen,	1·4	15·6	15·7	15·72	15·71
Oxygen,	24·4	23·2	22·1	22·59	21·56

These analyses do not differ more than the analysis of the same substance. Plants, in fact, contain within them the flesh of animals, and all the animal organization does in nutrition, is to put this flesh in the right place. But animals take up with their food other constituents of plants which contain no nitrogen; such are starch, sugar, gum, &c. These are not nutritive principles; they do not assist in making the flesh of animals; and when animals are fed on these alone, they die. But animals possess a certain degree of heat, and their bodies have generally a temperature above that of the atmosphere—about 100 degrees of Fahrenheit's thermometer. Whence then comes this heat? From the burning of the sugar, starch, gum, &c. The air that animals exspire is carbonic acid, the very gas that is produced by the burning of wood or charcoal in a fire. Charcoal is carbon, and animals take in daily a large quantity of carbon in their food. It is the burning or combustion of this substance in the body that produces animal heat. In hot countries, animals on this account take less carbon. The food of the East Indian contains only about 12 per cent of carbon; whilst that of the Greenlander contains 70 per cent. The depraved taste of the Greenlander, who drinks train-oil and eats tallow candles by the dozen, might be pitied or wondered at; but it is necessary to his healthy existence. Another reason for animals acquiring carbonaceous food in cold climates is, that the air is more condensed, and the same measure contained a greater quantity of oxygen; that gas being the agent which, by uniting with the carbon and forming carbonic acid, gave out the heat. Strong exercise also demands a large supply of carbonaceous food, on account of the oxygen taken in during the hard breathing thus produced. Oxygen, when once taken into the system, never escapes uncombined, and would destroy the whole fabric of the body unless a fresh supply of material was given. Clothes, by keeping in animal heat, rendered less carbonaceous food necessary in order to keep the body up to its proper temperature. The following table exhibits the principles of food necessary for the two great processes of life—nutrition and respiration:—

Elements of Nutrition.	Elements of Respiration.
Vegetable Fibrine,	Fat,
" Albumen,	Starch,
" Casein,	Gum,
Animal Flesh,	Sugar,
" Blood.	Wine,
	Spirits,
	Beer.

If it were not for some power or force within the animal fabric, it would soon become a prey to the chemical action of oxygen. The force that withstands this action is vitality—a principle independent of the mind, and which constantly opposes the destructive chemical laws to which the body is subject. Disease is the temporary ascendancy of the chemical over the vital force. Death is the victory of the chemical force. A dead body exposed to the action of oxygen is soon resolved into its primitive elements—carbon, hydrogen, and nitrogen, in the form of carbonic acid, ammonia and water; and these are the elements from which plants again prepare materials for the living body. These remarks will explain many facts known to the agriculturist, and will assist him in insuring more certainly many of the objects of his labors. It is very well known that cattle do not fatten so well in cold weather as in hot. The reason is this: The fat is a highly carbonized substance, formed by the animal from its carbonaceous food. In cold weather, the carbon in this food is consumed in keeping up the heat of the animal, which is at that season more rapidly carried off. This is also illustrated in an experiment made by Lord Ducie at Whitfield. One hundred sheep were placed in a shed, and ate 20 lbs. of Swedes each per day; another hundred were placed in the open air, and ate 25 lbs. of Swedes per day; yet at the end of a certain period the sheep which were protected, although they had a fifth less food, weighed 3 lbs. a head more than the unprotected sheep. The reason of this is obvious: the exposed sheep had their carbonaceous food consumed in keeping up their animal heat. Warmth is thus seen to be an equivalent for food. This is also illustrated by the fact, that two hives of bees do not consume so much honey when together as when separate, on account of the warmth being greater; and they have less occasion for consuming the honey, which is their fuel. Cattle, for the same reason, thrive much better when kept warm, than when exposed to the cold. The cause of animals getting fat is, that they take in more carbonaceous food than they require for producing animal heat; the consequence is, that it is deposited in the cellular tissue in the form of fat. Fat is an unnatural production, and its accumulation is not necessary for securing the health of the body. When stored up, however, it will serve the body for keeping up its animal heat, and by this means its life, till it is all consumed. An instance is related of a fat pig having been kept without food for 160 days, having been kept alive by its own fat. Another element necessary to be taken into consideration in the fattening of animals is motion or exercise. Every action of the body—nay, every thought of the mind, is attended with chemical change; a portion of the deposited tissues are thus being constantly consumed. It is on this account that when animals are fattened, they are kept quiet and still. The cruel practice of fattening geese by nailing their feet to the floor, and of cooping pigeons and chickens before they are killed, arises from a knowledge of this fact. When prizes were given by our agricultural societies for fat, and not for symmetry, animals were strictly prevented from taking any exercise at all. Mr. Childers found that sheep which were kept warm and quiet, fattened much faster than those that were allowed the open air and action. It is very difficult to fatten sheep and oxen in July, on account of the flies, which stinging them, keep them in a state of constant motion. The Cornish miners, on account of the laborious nature of their occupations, consume more food than laborers with lighter work. During the late riots in Lancashire the poor unemployed operatives found out that exercise and cold made them hungry; accordingly, they kept quiet in bed, and heaped upon themselves all the covering they could find. Englishmen in the East Indies are obliged to take a great deal of exercise, because they will insist on eating and drinking highly carbonized foods; and the heat of the climate not allowing the escape of much heat from the body, they are obliged to take in by exercise the oxygen of the air, in order to destroy the carbon which would otherwise accumulate in the system, and produce liver disease. In the Scotch prisons, the quantity of food given to the prisoners is regulated by the kind of work on which the prisoners are engaged, the hardest workers having the most food. The reason of the flesh of the stag becoming putrid shortly after its death arises from the quantity of oxygen which it takes into its system during the hard breathing of the chase. A hunted hare, for the same reason, is as tender as one that has been kept for a fortnight after being shot. The reason is the same. In both cases the action of the oxygen on the flesh produces approaching decomposition—in the one, quickly; in the other, slowly. Bacon, on the same principle, was, at one time, rendered more delicate by whipping the pig to death. Epileptic fits produce great emaciation, on account of the violent action to which they expose the body. Lord Ducie has performed some experiments highly illustrative of the foregoing general principles, and which also indicated what might be expected from their application to the practice of grazing. 1st experiment. Five sheep were fed in the open air between the 21st of Nov. and the 1st of Dec.; they consumed 90 lbs. of food per day, the temperature of the atmosphere being about 44 deg. At the end of this time they weighed 2 lbs. less than when first exposed. 2d experiment. Five sheep were placed under a shed and allowed to run about, at a temperature of 49 deg.; they consumed at first 82 lbs. of food per day—then 70 lbs.—and at the end of the time had increased in weight 23 lbs. 3d experiment. Five sheep were placed in same shed as in the last experiment, but not allowed to take any exercise; they ate at first 64 lbs. of food per day—then 58 lbs.—and increased in weight 30 lbs. 4th experiment. Five sheep were kept quiet and covered, and in the dark: they ate 35 lbs. a day, and were increased 8 lbs. These experiments prove very satisfactorily the influence of warmth and motion on the fattening of cattle, and are still going on.

Dr. Playfair then stated that he should proceed to examine the different kinds of food of cattle. The food of cattle is of two kinds—azotised and unazotised—with or without nitrogen. The following table gives the analysis of various kinds of food of cattle in their fresh state:

lbs.	Water.	Organic Matters.	Ashes.
100 Peas,	16	80½	3½
" Beans,	14	82½	3½
" Lentels,	16	81	3
" Oats,	18	79	3
" Oatmeal,	9	89	2
" Barley Meal,	15½	82½	2
" Hay,	16	76½	7½
" Wheat Straw,	18	79	3
" Turneps,	89	10	1
" Swedes,	85	14	1
" Mangel Wurzel,	89	10	1
" White Carrot,	87	12	1
" Potatoes,	72	27	1
" Red Beet,	89	10	1
" Linseed Cake,	17	75½	7½
" Bran,	14½	80½	5

A glance at this table would enable a person to estimate the value of the articles as diet. Thus every 100 tons of Turneps contained 90 tons of water. But the value of the inorganic and organic matters which these foods contained differed. Thus Mr. Rham states that 100 lbs. of hay, were equal to 339 lbs. of mangel wurzel. It would be seen by the table, that that quantity of hay contained 76 lbs. of organic matter, whilst the mangel wurzel contained only 34 lbs. One result of feeding animals on foods containing much water is, that the water abstracts from the animal, a large quantity of heat, for the purpose of bringing it up to the temperature of the body, and in this way, a loss of material took place. The mode proposed by Sir Humphrey Davy, of ascertaining the nutritive properties of plants, by mechanically separating the gluten, is unsusceptible of accuracy. The more accurate way is to ascertain the quantity of nitrogen, which being multiplied by 6-2, will give the quantity of albumen contained in any given specimen of food. The following is a table of the equivalent value of several kinds of food, with reference to the formation of muscle and fat; the albumen indicating the muscle-forming principle; the unazotised matters indicating the fat-forming principle:

lbs.	Albumen.	Unazotised matter.
100 Flesh,	25	0
" Blood,	29	0
" Peas,	29	51½
" Beans,	31	52
" Lentils,	33	48
" Potatoes,	2	24½
" Oats,	10½	68
" Barley Meal,	14	68
" Hay,	8	68½
" Turneps,	1	9
" Carrots,	2	10
" Red Beet,	1½	8½

The analyses in this table, are partly the result of Dr. Playfair and Boussingault's analysis, and partly Dr. Playfair's own analysis. The albumen series indicate the flesh forming principles, and the unazotised series indicate the fat-forming principles. By comparing this table with the former, it will at once be seen which foods contain not only the greatest quantity of organic matter, but what proportion of this organic matter is nutritive, and which is fattening; or that which furnishes living tissue and that which furnishes combustible material. In cold weather, those foods should be given which contain the larger proportion of unazotised matters, in order to sustain the heat of the body. Thus it will be seen that potatoes are good for fattening, but bad for fleshening. Linseed cake contains a great deal of fattening matter, and but little nutritive matter; hence, barley meal, which contains a good deal of albumen, may be advantageously mixed with it. Dumas, a French chemist, states that the principle of fat exists in vegetables, as in hay and maize, and that, like albumen, it is deposited in the tissues unchanged. But Liebig regards fat as transformed sugar, starch, gum, &c., which has undergone a change in the process of digestion. This is why linseed cake is fattening: all the oil is squeezed out of the seed, but the seed-coat, which contains a great deal of gum, and the starch of the seed is left, and these are fattening principles. The oxygen introduced by respiration into the lungs, is destined for the destruction of carbonaceous matter, but there is a provision made for taking it into the stomach with the food, and this is done by the saliva. The saliva is always full of bubbles, which are air bubbles, which carry the oxygen of the atmosphere into the stomach with the food. The object of rumination in animals, is the more perfect mixing of the food with the oxygen of the air. This is why chaff should not he cut so short for ruminating, as for non-ruminating animals, as the shorter the chaff is, the less it is ruminated, and the less oxygen it gets. Chaff is cut one inch for the ox, half an inch for the sheep, and a quarter for the horse. Some might, in consequence of this, suppose that cutting food is then of little use; but when it is considered that rumination is a strong exercise, or that an animal will not be eating more food that is ruminating, it will easily be seen how cutting facilitates fattening. In order that food may be properly ruminated, it requires a certain amount of consistency and bulk; hence all watery foods, as turneps, and mangel wurzel, should be mixed with straw. The opinion is very correct, that an animal "cannot chew its food without straw." An important inorganic constituent of the food is salt; it is a chloride of sodium. Whilst the chlorine goes to form the gastric juice, which is so important an agent in digestion, the soda goes to form the bile, which is a compound of soda. The bile is, in fact, a secondary combination, by which the carbonaceous matter is brought in contact with the oxygen, in order to be burnt. It is thus that common salt becomes so important and necessary an article of diet. In the series of changes by which the oxygen of the air is brought in contact with the carbonaceous matters in the body, iron plays an important part, and is hence one of the necessary ingredients of animal food. There are two oxides of iron, the peroxide and the protoxide; the first containing a large quantity of oxygen, the second a smaller quantity; the first, on being introduced into the blood, gives up a portion of its oxygen to the carbonaceous material of the bile, carbonic acid and protoxide of iron being formed; these two unite, forming a carbonate of the protoxide of iron, which, on being carried to the lungs, gives off its carbonic acid, and the protoxide of iron absorbing the oxygen brought into the lungs by respiration, forms again a peroxide, which again goes into the circulation, and meeting with carbonaceous matters of the bile, unites with them, and produces again and again the same series of changes. The small quantity, then, of inorganic ingredients in the food, performs very important functions; and in the absence of them, animals would die.

Answers to Inquiries, &c.

USE OF ASHES.

"Messrs. Editors.—I live in a region of country where ashes, and particularly leached ashes, may be obtained in almost any quantity. But we are ignorant of their value and the best methods of using them. I should be glad to learn through the Cultivator, their analysis, their effect on soils, the manner in which they act, and the soils most suitable for their use.

A Woodsman."

The constituents of hard and soft wood ashes differ in some degree, although the base or the alkali is the same. Dr. Dana has given the best analysis of ashes we have met with, and as it agrees in the main with those of Sprengel, Chaptal, &c. we shall condense it for this place. Ashes are in two parts, soluble and insoluble; leaching with water separates them. The average quantity of ashes from hard wood, soft wood, and wheat straw, and their soluble and insoluble parts in 100 parts of each, is as follows:

	Quantity of ashes.	*Soluble.*	*Insoluble.*
Hard wood,	2·87	13·57	86·43
Soft wood,	·0083	50·	50·
Wheat straw,	·044	19·	81·

Of the hard wood, 100 parts contain soluble and insoluble matters as follows:

Soluble.		*Insoluble.*	
Carbonic acid,	22·70	Carbonic acid,	35·80
Sulphuric,	6·43	Phosphoric acid,	3·40
Muriatic,	1·82	Silex,	4·25
Silex,	·95	Oxide of iron,	·52
Potash and soda,	67·96	Oxide of manganese,	2·15
		Magnesia,	3·55
		Lime,	35·80

Soft wood ashes differ from hard wood principally in having less carbonic acid in the soluble and insoluble parts, and more silex and oxide of iron in the insoluble. 100 parts of straw ashes show the following results:

Soluble.		*Insoluble.*	
Sulphuric acid,	0·2	Phosphoric acid,	1·20
Muriatic acid,	13·	Silex,	75·
Silex,	35·6	Oxide of iron,	2·50
Potash and soda,	50·	Lime,	5·80
		Charcoal,	15·50

Leached ashes, as commonly found, nearly resemble the insoluble of these tables, except that as the process is conducted less skilfully by the ashery man, there is always more or less potash left in the ashes after leaching. According to Dr. Dana a cord of leached ashes contains of phosphoric acid, 117 lbs.; of silex, 146 lbs.; oxide of iron, 17 lbs.; magnesia, 19 lbs.; carbonate of lime, including that added in leaching, 3,072 lbs., and potash 50 lbs. While unleached ashes belong to the alkalis, it will be seen that the leached ones must be classed with the carbonates.

The manner in which ashes act on soils is depending in a great measure upon their condition, whether they have been leached or not. Ashes act on soils chemically and mechanically. The potash contained goes to form silicates, hence the great effect of ashes on grass lands, silicates being essential to the grasses. They act chemically too in neutralizing acids existing in the soil, and producing a bad growth of weeds or plants not desired. Their mechanical effects are found in their rendering soils less tenacious, and rendering them more suitable for crops. The chemical effects of leached ashes are less than those of unleached, while from the additional lime they contain, their mechanical effects are greater. So far as regards the phosphates which exist in ashes, and which act so important a part in their action on soils, there is little difference between the leached and the unleached.

As to the soils on which ashes are the most valuable, experience and observation show that ashes are more efficacious on soils that are naturally dry, or have been made so by draining. On wet soils, leached ashes produce little or no effect, but we have found the best results on moist meadow land, by sowing unleached ashes over the surface at the rate of about 20 or 30 bushels per acre. It had the effect of partially destroying the mosses and coarse grass which occupy such lands to the exclusion of good grass, and it gave a very heavy crop for two or three years after its application. Old pastures on light lands are materially benefitted by leached ashes, their effect being on such soils but little inferior to gypsum, though a larger quantity must be applied. Some ten years since we applied a heavy dressing of leached ashes to about an acre of land in the center of a field, and the beneficial effect the last season, was clearly discernible in the pea crop grown on this field. This was not light land, but not wet. It has been twice well manured in this interval, yet the ashed land appeared to maintain its supremacy, feeling the manure as much as that to which no ashes had been given. The effects of ashes are unquestionably most valuable, and should always be made available where ashes can be had. Too many farmers are in the habit of selling them from their farms, a miserable policy, as no such manure should be allowed to leave the farm. Ashes are exceedingly useful in making compost from swamp muck or other vegetable matter, where an alkali is necessary to promote decomposition.

LIEBIG'S THEORY OF PLASTER.

Our correspondent, John Moxon, Esq. of Charlotte, N. Y. in a late note says—"I see in your Dec. No. a letter from Mr. Patridge, unsettling Liebig's decision on plaster and ammonia. Now this is one of the cases in which those who, like myself, are no chemists, want the Cultivator to step in and decide. Liebig's theory appears to me the only one as yet promulgated, on which a farmer could apply plaster understandingly; and if its correctness can be maintained the use of plaster can be very beneficially extended."

Without attempting to decide a question respecting which practical chemists differ, we may say that with the exception of Liebig's theory not satisfactorily accounting for the fact that plaster is not at all times and on all soils equally useful, as it should be if the theory were correct in all its details, we have found no system which agrees so well with the results we have obtained from experience as this. We do not know a chemist of eminence who dissents from the opinion that plaster absorbs ammonia; and what is more, the experience of all makers of compost or artificial manures agree with this supposition. Whether this can be done without effecting a decomposition of the plaster, and the formation of new compounds, we leave for chemists to decide. The theory of Liebig is the theory of farmers generally, so far as practice is concerned; and we advise all our farmers, while they allow chemists to settle points of mere theory among themselves, to use plaster liberally; confident that wherever applied to the soil, its effects cannot be otherwise than useful, although its beneficial influences may vary in degree.

BUTCHER'S OFFALS.

"Messrs. Editors—I have the means of obtaining a considerable quantity of butcher's offals, or the blood, entrails, &c. of animals, and I should be pleased to learn the best method of converting it into a manure. In the ordinary mode of decomposition, the process is not only extremely offensive, but a large portion of the most valuable part must be lost. Will you be so kind as to give your opinion on this subject in an early No. of the Cultivator?

Inquirer."

The best method of converting the substances named by Inquirer, and all others of a similar nature, into manure, and to prevent the loss of their most fertilizing portion, the ammonia, is to make them into compost with such materials as will absorb and retain the gaseous matters as fast as they are liberated. The two substances best adapted for this purpose are charcoal and gypsum. Burnt clay is also a good article for this purpose, and it is frequently found in large quantities in the vicinity of old brick-kilns. But charcoal stands at the head of absorbent substances, and where charcoal dust can be had, nothing better can be used. A layer of mold, a layer of animal matter, a layer of coal dust or charcoal, and so alternately, the whole covered with mold, will, when decomposed, make a manure of the best kind. Plaster of Paris or brick dust may be substituted for the charcoal, but the effect will not be as efficient. Night soil mixed with charcoal or plaster, becomes an easily managed manure, and the escape of the ammonia is checked at once. Fish, which in some parts of our country is extensively used as a manure, might be made far more useful if composted in the way above recommended; and charcoal or plaster should always be mixed with common stable or hog pen manure, when the smell indicates that the ammonia is escaping during the process of fermentation. If neither plaster or charcoal are at hand, the animal remains may be mixed up with rich mold, pond mud, or peat, for the purpose of undergoing decomposition. The finer the offals and entrails are, or the more completely they are separated by the earths used, the better will the manure be. In Germany, according to Sprengel, animal matters, and animals that die of disease, are cut into very small pieces, strewed over the soil, and covered with the plow as soon as possible. This course is far preferable to that which leaves them above ground, a pest and nuisance, although their conversion into compost is the better method of disposing of them.

Mr. GARNETT'S ADDRESS at Fredericksburg.

We have been kindly furnished with a copy of the address delivered by Mr. Garnett before the Agricultural Society of Fredericksburg on its 23d anniversary. It is one worthy of the subject and of the man; happily combining theory and practice, and illustrated by examples drawn from some of the best farmers in that part of Virginia, and in the state of Delaware, to which place he paid an agricultural visit last fall. Mr. Garnett every year conducts a series of experiments in some of the branches of agriculture; and the result of last year's we find detailed in the address before us. They relate to the planting and improvement of corn, to the culture of the "Fly-proof" wheat, and to the best time for cutting wheat. Mr. Garnett's experiments were adverse to the opinions entertained by some, that it is advantageous to leave suckers on corn. His experiment with his China corn, being the third year he has planted it, was favorable; and he concludes this variety of corn will be a valuable one. He states that it ripens early, being fit to grind by the middle of August. With us, its ripening is rather uncertain. He thinks the only title to "Fly-proof," belonging to the wheat experimented upon, "is that it recovers better than other wheats from the depredations of this destructive insect. It is also less liable to rust than other wheats, "except the two varieties of early May wheat." It is the same as that cultivated in Delaware and Pennsylvania as the Mediterranean wheat. The experiment to test the proper time for cutting wheat was made by five members of the Albemarle club. "Each cut three parcels of wheat; one perfectly ripe, another in the dough state, and a third in the milky state. The two last were dried in the shade, and then compared in both weight and count with the wheat which had been cut when fully ripe. The result was, that the wheat cut in the dough state had lost between five and eight per cent; and that cut in the milky state had lost between forty and fifty." The result of these experiments, so variant from the carefully conducted ones of Mr. Hannam, would seem to demand farther trials in this country, as it would seem to indicate to us that the extreme heat of our summers dries the early cut wheat so much sooner here than in England, that the maturing is arrested at once, instead of being gradually carried forward as there. Repeated experiments with potatoes has convinced Mr. Garnett that the Rohan potatoes are superior to most of our common varieties for stock, and far more productive; but that they are inferior as a table potatoe to the Mercers, Pinkeye, or Foxites.

We are unable to enter upon the interesting details given by Mr. Garnett of his visit to Delaware, and his notices of the improved agriculture among the spirited farmers in the vicinity of Wilmington. The beautiful Devons of Mr. Holcombe, and the immense peach orchards and fine Leicestershires of Mr. Reybold, attracted much of his notice. Mr. Reybold has on his farm 1000 Leicesters, which yielded at the last shearing an average of eight pounds to each fleece. The able remarks of Mr. Garnett on the subject of popular education are deserving a careful perusal. It is one which is everywhere too much neglected; and it is well for such men as Mr. Garnett to raise their voices in its behalf. It is a subject which cannot be too frequently or too earnestly enforced, as education is of vital interest in a country, the institutions of which are depending on the intelligence and virtue of its citizens.

FARMERS' CLUB.

The first monthly meeting of the Farmers' Club, recently formed in this city, was held at the office of the Cultivator, on Wednesday, the 11th of Jan., and was well attended; gentlemen being present from the counties of Albany, Greene, Cayuga, and Schenectady.

Mr. Prentice presented for exhibition, a basket of Apples, among which were the following varieties:—Flushing and Esopus Spitzenburghs, Gilliflower, Newtown and Fall Pippins, Gloria mundi, Tallman Sweeting, Ribstone Pippin, Seek-no-further, R. I. Greening, Alexander, Pearmain, and Boston Russett; also some superior stalks of Celery.

Mr. Bement, presented specimens of Dairy and Rock Salt; and Mr. Caley, one of his Improved Probangs.

The question selected for this meeting—(the best method of [mechanically,] preparing the soil for the reception of seeds, roots and plants,)—was discussed in an interesting and able manner, each member giving his views, practice and experience, and resulted in the following resolutions:

Resolved, as the sense of this meeting, That deep plowing, so deep if possible, as to turn up annually a portion of the subsoil, and harrowing and rolling repeatedly, are essential to good farming.

Resolved, That fall plowing is beneficial to heavy soils—but not so to light soils.

Resolved, That the Club have little experience as to the value of subsoil plowing, but from the information derived from this discussion, they are of opinion that it is of the greatest importance to good husbandry, especially in a climate like ours, where we sometimes suffer from drouth and again are inundated with rain.

Messrs. Nott, Tucker, and Wilson, were appointed a committee to draft a Constitution and By-Laws for the Club, and to report at the next meeting.

The question selected for discussion at the next meeting of the Club, is—"The best method of making and preparing manures."

Messrs. Prentice, Wilson, and Hillhouse, were appointed a committee to report on the subject for discussion, at the monthly meeting of the Club in March.

The next meeting is to be held at the office of the Culvator, on the second Wednesday of Feb., at 10 o'clock, A. M. Gentlemen from all parts of the state, are respectfully invited to attend.

White Carrots.—The N. E. Farmer informs us that B. V. French, Esq. of Braintree, Mass. raised the past season, over 22 tons per acre of White Carrots, on ground not particularly well prepared for roots. He attributes this great crop principally to the use of the subsoil plow on the land the previous season.

Original Papers from Contributors.

MANAGEMENT AND APPLICATION OF MANURES.

THE first great requisite to successful farming, is manure. In its manufacture and proper management, most of our farmers have yet to take the first step. Were these well understood and acted upon, the result would soon be an increase in the value of the farm products of this country of *many hundred millions of dollars.* Does this startle any one ? Then let us make a brief calculation.

It must be familiar to most farmers, that our average products per acre, taking the country through, are not more than 15 bushels for wheat, 25 bushels for corn, 30 for oats, and 20 for barley. But agricultural societies and periodicals have sufficiently established the fact that these crops may be increased at least three fold. Wheat has often been produced here at from 40 to 50 bushels per acre; and three counties under the immediate influence of the Highland Agricultural Society of Scotland, have *averaged* 51 bushels per acre on land where but little was formerly grown. Corn is often raised at the rate of 100 to 130 bushels an acre; and with some cultivators, the annual product has for several years exceeded 100 bushels. These facts are established on undisputable testimony, and similar results have fallen under the direct observation of the writer and many others. Other crops have been increased at nearly equal rates. The chief cause of success in all these instances, is the fertility of the land, made so by manure. Now, the estimates founded on the census, make the amount of grain crops (excluding hay and roots,) in the United States, no less than 640,000,000 bushels; which at an average price of 40 cents a bushel, would amount to $250,000,000. If this amount were tripled, as it well might be by manure, it would be $750,000,000. But the real profit would be more than tripled, as large crops generally yield a much greater nett profit than small ones. The increase in stock and manufactured articles, inevitably resulting from this improvement, is not taken into the account.

This subject naturally divides itself into three parts. The first includes the *materials* for manure; the second, the best modes of *using them* in making manure; and the third, the best mode of *application to the land.*

Of MATERIALS, one of the most abundant and universal is the excretions of animals. Straw, peat or marsh muck, pond mud, earth, sawdust and leaves, and lime, ashes, and plaster, are mixed with it, and serve to retain its volatile and liquid parts. Other substances exist in smaller quantities, but may sometimes be obtained in abundance, as bone dust, horn shavings, woolen rags, dead animals and other animal substances, all of which are of great value as manure.

A great loss occurs in common practice in not retaining the volatile and escaping parts of dung; a large portion is suffered to wash and run away; and a still larger part escapes in vapor or gas. By employing muck or peat in large quantities in admixture, this is mostly prevented; at the same time, a part of the materials of the dung convert the peat itself into powerful manure.* E. Phinney of Lexington, Mass., and others, have found that two cords of peat and one of cow dung, mixed together, produce a compound as fertilizing as cow dung alone. Hence the greatly increased amount of manure which every farmer could make by large layers of muck or peat in his barn-yard, is obvious. But the successful use of peat does not always require dung. Ashes, leached or fresh, in sufficient quantity, will produce as good an effect. Sixteen bushels of good ashes are found to convert a cord of peat into excellent manure. The materials should of course be well intermixed, when they may be applied to the land in a few days. G. Robbins, of Watertown, Mass., an extensive soap manufacturer, has a very productive farm, which he keeps in a high state of fertility, without the use of a particle of barn-yard dung. He keeps 11 horses, 4 cows, and 100 sheep; the manure from which is all carefully saved and sold; while the refuse or spent ashes from his establishment, mixed with peat, constitutes the sole enriching material for his land. The peat is dug in the fall, and the ashes, one-third the bulk of the peat, is applied in the spring and well dug over; and the whole applied to his fields. It is asserted that the animal matter of a dead horse, is sufficient to convert 20 tons of peat into more powerful and lasting manure than stable dung. Dr. Jackson states that one barrel of fish will convert a load of peat into very powerful manure. The value of one cord of peat or swamp muck, is considered equal to the dung of one cow for three months. Yet there are thousands of our farmers whose lands contain almost inexhaustible beds of this precious material, which is indeed worth a hundred fold more than all the southern gold mines; but which lies year after year untouched, while meagre and diminished crops tell the poverty of the adjacent fields.

In a very large part of our country, peat may be obtained for most farms, within the distance of a few miles at farthest; and may be drawn in winter on snow. If the distance is considerable, it would be a matter of economy to get it out early in autumn in heaps to dry, after which it becomes so light that large masses can be drawn at a single load. Freshly dug peat contains more than five-sixths water; but even then is no heavier than stable manure. Where peat swamps cannot be drained, it will be necessary in nearly all cases to dig it out in the dry part of autumn. But where draining can be performed, this may be done any time during winter. From a good locality it may be shoveled out with great rapidity; a man will fill a cart in a very few minutes. The presence of muck in swamps is readily determined by thrusting down a sharp pole, which will enter common soil only a few inches, but will penetrate muck many feet.

Where peat cannot be obtained, there are substitutes. Pond mud has been applied to land, and has doubled the products. It would certainly be not less efficacious when mixed with barn-yard manure. The application of rich soil or even common earth, would greatly assist in augmenting the quantity. Straw, abundantly used, is not a bad substitute for peat; although greater time is required for the reduction of the fibrous parts. Saw dust can be procured in many places in large quantities, and forms an excellent material for the absorption of the richer parts of stable dung.

The application of lime, ashes and plaster, is generally made separately to land. Both lime and ashes have produced astonishing effects when applied to soils whose sterility results from *sourness,* which quality is generally indicated by the growth of sorrel and broom-grass. Lands in the southern parts of New-York, not yielding two dollars per acre a year, have by the use of 30 or 40 bushels of ashes to the acre, yielded the second year a nett profit of more than fifteen dollars. Dr. Jackson states that blowing sand, or a pine barren, scarcely producing 10 bushels of corn to the acre, by a judicious application of ashes, has produced 40 to 50 bushels. Similar effects have been produced by dressings of lime, and shell marl on the worn out and almost totally barren lands of Virginia. The use of lime on fertile lands, is in most cases highly beneficial, but not so striking, as a considerable increase in a crop already large, is not at once perceived. This has induced some to suppose that lime is of little or no use on rich soils; where the experiment has not been submitted to the test of accurate measuring. The quantity of lime per acre, may vary from 50 to 500 bushels. If *hot* or *magnesian* lime, such as is generally used in the vicinity of Philadelphia, where lime has been extensively used to great profit, it should not exceed 100 bushels an acre. But land is not injured by common lime, applied much more copiously. The writer has known instances where it has been administered at the rate of 400 bushels to rich soils with decided benefit.

But in all cases, lime and other manures of its class, need thorough intermixture with the soil. Different experimenters state that its full effect is not produced until the third or fourth, or even the seventh year; which is doubtless owing to the fact that thorough intermixture has not taken place sooner. Failure often attends inattention to this particular, both in the use of lime and ashes. To facilitate the spreading of lime, it is generally covered with earth in small heaps until pulverized by slacking. It is not less efficacious when slacked, as it is obvious that a thin coating on the ground would in any case be very speedily saturated with carbonic acid. Hence old refuse lime from kilns, if not mixed with stones nor too much clotted to spread, and shell marl, are as good as any.

Ashes, applied to grass lands, in most cases greatly increase the crops, and is one of the safest and most certain ways to apply it unmixed.

But although lime, plaster and ashes are generally applied separately, a decided improvement consists in using them in mixture with barn-yard manure. They not only assist in retaining the valuable parts of the latter, both before and after spreading on the soil; but the thorough previous intermixture prevents those uncertainties which often result when they are applied alone. Bone dust, and other animal manures, are also most economically and safely applied to the dung heap. It is here that a great improvement in the use of these powerful substances is to be made.

Nearly all animal substances form very active component parts of manures. Hence fish, and all dead animals, animal matters from slaughter houses, hair, &c., should never be suffered to waste. Covered with peat or earth, and a portion of lime or plaster, the volatile parts will be absorbed, little or no offensive odor will pass off, and manure of great power will be produced, when the decomposition is complete. It is stated that sixteen thousand dead horses are thus yearly converted into manure in Paris and its vicinity.

A most important material for manure, but generally entirely neglected, is night soil. Poudrette manufactured in the cities, consisting chiefly of night soil with peat, plaster, and lime dried, is of such efficacy, that one bushel is equal to a load of stable dung. The experiments of the writer fully corroborate this; and the mode he adopts is the following: A plank trough is placed under the privy, and frequent applications made of plaster, lime and ashes, (an addition of peat would be still better,) and when needed, it is drawn off, and applied either directly to the land or to the dung heap in the barn-yard.

The PROPER USE and MIXTURE of these materials forms a most important part of the business. Stable dung is the chief material used by farmers; and the best mode of saving and using it, is one of the first requisites in good farming. The proper construction of barn-yards, hence becomes a matter of great consequence. A convenient plan for common use, is the following: A depression is made in the center of the barn-yard, two or three feet deep, and from two to three rods in diameter; the adjoining stables being conveniently situated, so that all their contents may be daily wheeled and thrown into it. This depression should be water-tight, which will be the case if made of compact clayey soil. It would be better if paved with stones, the interstices being filled with clay; or still better if they could be covered with a coat of water lime mortar. In the latter case, they would need to be kept covered in winter with manure, to prevent the mortar freezing and cracking. This basin serves to prevent the escape of all the liquid parts.

On the bottom of this, should be spread a layer of peat from six inches to one foot thick, if it can be obtained; and if not, pond mud, rich earth from muckey places, or common soil; or even a thick layer of old straw. On this, the cleanings of the adjoining stables, where litter should be freely used, is daily carried and thrown by a large boxed wheelbarrow, and the frequent treading of cattle's feet intermixes it well. Successive layers of peat or soil should be applied during the season. Peat, if piled in a large heap, will not freeze so much as to prevent frequent application in winter. Into this heap also, all refuse animal matter should be thrown, the contents of privies be drawn, and occasional thin layers of ashes, lime and plaster, be spread, so as not to become accumulated in masses, but evenly mixed through. If this basin becomes too wet for cattle to walk across it, more straw and peat must be used to absorb the liquid. Plaster should also be daily strewed in the stables, and it will prevent the escape of much volatile manure.

Thus, by a free use of these materials, but more especially by a copious application of peat, muck and straw, it is believed that the manure manufactured by most farmers, would be increased at least ten fold.

The great labor, will strike many as a strong objection; but let them remember that this is laboring to some profit—far more so then scratching over barren fields and raising scanty crops.

One great neglect, even in farmers who otherwise take good care of manure, is suffering the urine of animals to waste. The preceding plan will save all from those in the yard. Those in stables should also be attended to. No stables should have plank floor, unless it can be made water tight. In this case, the urine is to be conducted in troughs at one end of the stables, into pits filled with peat or muck. The urine of a single cow for one winter, according to Dana, is sufficient to convert 20 loads of peat into excellent manure; and one peculiar value of this manure, is that it contains no more fibrous matter than the finest compost. It is generally best, however, to have earth floors, covered first with a thick layer of peat, and with another thick layer of straw. Sometimes loose floors are taken up once or twice in the year, and a bed of peat spread beneath.

APPLICATION OF MANURES. Common stable manure loses a large part of its value by fermentation. When it becomes a soft cohesive mass, one-third or one-half of its good qualities is gone. Hence when applied fresh to land and immediately plowed under, its volatile parts are absorbed by the soil and loss prevented. The experience of many has led to a different result, who suppose that fermented manure is best. This is because the latter admits of thorough intermixture. But fresh or long manure is usually spread in large lumps, which are often imperfectly covered, and lie in large masses instead of being incorporated with the soil. Stones and unburned bricks thrown together, would form a poor soil indeed, but when ground down to fine sand and clay, they constitute a mixture like the basis of our richest soils. Thorough intermixture is the great leading principle in all chemical operations, and it must not be neglected in this. The following experiment by David Thomas of Cayuga County, fully corroborates this position: He says, "in the spring of 1840, I had no ground for field beets, but a small lot where corn had grown for two years in succession. It was unfit for such a crop without manure; and I had only fresh manure from the stable, which has long been considered most unfavorable to the beet. My necessity, however, prevailed against opinion, and I took the responsibility. From each line where the beets were to grow, two furrows were turned so as to leave a wide dead furrow. Into this, manure was thrown from the wagon, each forkful touching the one just behind it, till the row was completed. It was well covered by turning two furrows together over it, which *held it down* while the harrow was passing four times in succession, breaking, pulverizing, and mixing it intimately with the soil. Again, two furrows were turned together over the row, and the harrow passed twice more, in all six times. By this process, the ground was reduced to a fine tilth; and if there were any better beets in the country, I did not see them."

Hence also, one coat of manure plowed deep, or one coat applied as top dressing, is only partially efficacious. Hence also, grass lands made rich by the culture of previous crops, are better than those made so by top dressing alone. A recent experiment of the writer, exhibits this principle in a strong light. Land not fertile, was covered with a good coat of fine manure, and well incorporated with about three inches of the upper surface by repeatedly passing a cultivator. Ruta Baga was sown on one part, and Norfolk turnep on the other. For the first six weeks they made as rapid growth as the best turneps in the country; but after that, their growth almost ceased, and there was not one quarter of a good crop. Hence when such top dressings are applied, there should be a sufficient quantity of manure previously turned in deeper to carry on what is begun; and hence also, manuring in hills can only be of partial advantage.

J. J. THOMAS.

Macedon, N. Y. Dec. 1842.

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*The limits of this essay preclude the chemical explanation of these various operations; and facts only are given which have been well established by experience.

THE IMPROVED CULTURE OF COTTON—No. II.

MESSRS. GAYLORD & TUCKER—"Condition and circumstances," says the Cultivator, "should not control us. We should mold them to suit our wills." A truly laconic sentiment this; the grand importance of which I have well and long since considered. And though I acknowledge to the fullest extent the force and justice of such decisive resolve as a governing principle, and regard it as the very "*sine qua non*" to certain success, in the practical operations of the agriculturist, yet he must be a Lacedemonian indeed, over whose stern prowess circumstances may not occasionally exercise a leeward influence.

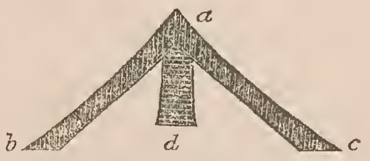
Engagements of an urgent character, and without my control, have caused the delay of this number, which, with the advanced stage of the season, render it necessary that I change the order of my original design, as previously indicated in communicating with you upon "the improved culture of the cotton plant;" and instead of giving you the principles and philosophy of the system, &c., according to my views of the peculiar characteristics of the plant, under the various circumstances of soil and culture, I propose devoting this paper to "the details of the modus operandi by which my experiments have been conducted, together with the character and quality of the soil, &c." for the timely convenience of those kind friends, and other gentlemen, in the cotton region, friendly to agricultural economy and improvement, who may have exercised only faith enough in the system, *acting wisely*, to make the experiment.

In commending this improvement, gentlemen, to the planting interest of the country especially, and previous to going into the details of its practical application to the culture of cotton, permit me to call the considerate attention of your readers in the cotton region by a few brief remarks to two very obvious facts that exist, palpably destructive to the best interest of the cotton planter —the direct effect of the present system of culture. In the first place, I remark, that under the system of the country, the maximum production of cotton, *at a ruinous cost*, has equaled that of its consumption; which is generally admitted, I believe, to be the principal cause of the low prices of the article, which general admission also agrees that such prices pay *very little*, if *any profit*, upon the immense capital vested in its production. I remark, again, upon the disproportionately large amount of *inferior and poor* cotton thus produced, as compared to the good, which, upon the authority of both merchant and planter, may be safely set down at from three to four bags of poor, to one bag of good cotton. This fact, so abhorrent to the natural order of all vegetable perfection, produces a state of feeling and an influence in the cotton market prejudicial to the real value of cotton, and consequently to the interest of the planter. These are plain matters of fact, and must have excited the attention of planters in some degree, especially the latter, which I suppose to have existed to a very injurious extent for at least the last quarter of a century.

To meet both these difficulties, and to convert them in a direct reverse ratio, into sources of profit, constitute but a part of the advantages which this improvement offers to the cotton planting interest of the country. It proposes to meet and obviate the former difficulty by producing, as previously stated, the present and necessary amount of cotton, with but *one-third* the cost or capital now engaged in its production; furnishing thereby to the planter a *direct and nett profit* of over 100 *per cent* upon the present market price. To illustrate and prove this position will be a part of the object of another number. Again; by subjecting the cotton plant to this system of improvement, which favors its natural arborescent growth, and the more perfect development of its staple and great proflicacy, the latter difficulty is obviated and the preponderance changed, as clearly shown by my experiments, in favor of an infinitely superior staple: thus the planter receives nearly an entire crop of strictly prime cotton, upon the influence of which the market price becomes established, and its tendency favorable to the planting interest. I have not room here to do more, at present, than merely to call attention to these facts. I now proceed to the immediate object of this number.

This improvement, when it shall have attained its highest state of perfection, contemplates the "*system of rotation*" in planting, under which the land designed for cotton lies the previous year in the state of fallow, which is found by experience most favorable to the growth and fruitfulness of the plant. I commence the preparatory operations for planting about the 1st of March, by spreading upon the land *broadcast* two to three hundred bushels of manure per acre,—light stock yard and stable compost. I then run off the land in rows of three feet with a scooter plow, opening a good furrow some three to four inches deep; this done, I take a large size shovel plow and cross the scooter furrows by rows, running at right angles, of five feet wide. I am now prepared to commence manuring in the hill, having first ascertained that I have 2940 hills on each acre, which will require, by giving each hill a half gallon of manure—same kind of compost—184 bushels nearly, which I haul on the land in a cart, first graduated to a certain number of bushels, and with spades likewise prepared for the purpose, I deposite the requisite quantity of manure in each hill. By this means, which in practice will be found simple and expeditious enough, I give four to five hundred bushels of manure to each acre—*an infallible insurance* for 5000 lbs. of a superior staple per acre. As the manure is placed in the hill by rows, the wide way, a short distance in advance, a *good plow hand* follows with a turn plow, which should run into the soil from *six to eight inches deep* at least, and turn well, with which four furrows are thrown together on each row: thus fixing the half gallon of manure in each hill, entirely within the *region of constant moisture*. This gives me a fine, large bed, and well broke, to lie until at or about the first of April, when the cotton seed should be planted. This is done by first opening the bed as shallow as possible, with some instrument such as that described by M. W. Philips, Esq. in the March number of the 9th vol. of the Cultivator. This I prefer to any other instrument of the kind I have ever yet seen, since its depth of furrow may be graduated to a positive certainty so as to avoid disturbing the manure in the hill; it should not be opened out deeper than one inch. The bed thus opened, and the seed previously rolled in leached ashes or sand, which answer very well, though I prefer a compound of two parts of ashes to one of common salt, made moist with water; the seed, well rolled in this, are carefully dropped over the manure. Eight to ten seed in a place will answer to secure a stand. There will be no difficulty in dropping the seed over the manure in the hill, when it is recollected and observed that upon the unbroken space of some two feet between each row, the scooter furrows will be found an unerring guide to the manure in the bed at distances of three feet. The seed thus dropped I prefer to have covered with a hoe, *lightly and carefully*; bearing in mind this golden truth, that "a crop well planted is half made." Immediately after planting, the middles or unbroken balks should be plowed out. The crop of cotton thus planted, which should not exceed *three to four acres* to the hand, may be performed in good time and well done. In a few days, say nine to twelve, the cotton will be up, presenting a most healthy and thrifty appearance. The next operation to be performed, as early as possibly convenient, is to plow out the middles *well*, the wide way, with a good shovel plow, having first run around the young plant with a scooter plow. The hoe hands follow and thin the cotton down to two stalks, giving it a small quantity of soil. This operation *well done*, the plant is at once placed beyond all danger, since its taproot will now have taken such hold upon the manure below as to enable the plant to outstrip either grass or weeds, having yet to spring up.

Under this treatment, the *time-consuming* and worse than useless operations of *bar-shearing, scraping* and *chopping out*, are saved, as much to the benefit of the tender plant, as to the interest and economy of the planter, in despatching the *hurry and push* at this stage of the crop; and at the conclusion of this first working, I have my cotton growing off and doing well. I have now no further use for a plow in its subsequent culture, but use the *sweep*,—a kind of horse-hoe,—I call it a sweep in the absence of a more appropriate name, an idea of which, may be had from the subjoined figure.



This instrument is easily made by any blacksmith, by laying the wings *a. b.* and *a. c.* upon the point of a scooter *d.* in the form of an isoseles triangle, which is fastened upon the chip of a shovel plow stock, by a heel pin, in the same manner you would a shovel. From the tip of the wing *b.* to that of *c.*, it should be 2 feet, forming a kind of *horse-hoe*, by which a row is swept out at 3 furrows. This should be so curved and graduated upon the stock as not to go into the soil deeper than 1 inch, and as much less as possible, to enable it to cut the young grass and weeds that may be springing up. The great and singular advantages of the sweep over all instruments of the plow, harrow, or hoe kind that I have ever used, are these,—that it will *kill* a greater quantity of grass and weeds in a given time, and *do less injury to the surface roots* of the plant, *so essential* to its *progressive* prosperity. The hoe-hands following this instrument, thin the cotton to a stand, *one stalk* in a place, and draw up a small quantity of soil to the standing plant. The entire subsequent culture is performed with the sweep and hoe, which should simply scrape and pulverize the surface, so as to kill any grass and weeds that may appear, and allow a *free circulation* of atmospheric air to the fibrous roots of the fruiting stalk, requiring at this *critical period* all the aid and nourishment that culture, soil and atmosphere can afford. By the first of July my cotton stands from 5 to 6 feet high, and I have it topped by the 10th at farthest, after which I run the sweep once more through it, and the hoe if necessary, to remove any grass, that may have sprung up immediately about the stalk. After this, and by this time frequently in places, the cotton will become so much interlocked, and the ground so shaded, as to keep down all other vegetation —yet it may be found necessary again to chop about in places with the hoe, when the cotton may not have locked so early. This should be invariably attended to. This brings us again to the season of harvesting the staple.

Let no planter prejudge and reject this system, upon the score of simplicity, supposing the process too simple to accomplish the object proposed; first, act wisely, make the experiment, and try it. Strictly follow this plain and simple process, and if the land does not reward your pains-taking, with *five to six fold the quantity per acre*, of a *superior staple*, than has at any previous season been taken from it, in its natural state, I will present the experimenter with *one bushel* of my *improved seed*, with which to perfect the experiment. At another time I propose devoting a paragraph to the importance of *selecting and improving* cotton seed.

It will be observed that manuring constitutes a large item, in this system of improvement, a source of revenue too much underrated by planters, and consequently too much neglected, because the subject requires a little extra attention—which attention is so essential to the prosperity and well-doing of a farm. Nor, gentlemen, have I seen any thing better said, or more true, than I find in the sentiment, under the head of "*a few queries*," in the last December Cultivator, where you remark, to the planter and farmer: "In your manures is your *gold mine*, more valuable than any of the Carolina ones, and you should be anxious to increase them accordingly." But I hear some planters say—"it is impossible to produce so much manure"—this is, however, the result of inexperience, and the want of *determination*. I am entirely convinced, from my experience in making manure, that it is not only practicable, but a perfectly easy task, to prepare upon every plantation in the cotton region, great or small, 1500 *bushels* of an excellent article of compost, per annum, to the hand—at a cost of less than two cents per bushel—by the assistance of the stock of horses, cows and hogs, upon properly arranged lots. This is done by having the lots well littered, by throwing in pine straw, in large quantities and frequently, or oak leaves, where the pine straw is not to be had, with cotton and corn-stalks, &c. and occasionally haul and scatter upon the litter, a few loads of muck or marl, one or both of which may be found on or near every farm in the country; upon these lots, pen and feed your stock every night. The manure thus prepared, should be collected in pens or pits, three or four times during the year, after heavy falls of rain, and the lots replenished with pine straw, &c.—by this means a very large amount of manure is collected during the season, and that too, at an inappreciable cost. Again, we have another difficulty; there are but few persons who believe that pine straw can be converted into manure; for the benefit and information of such, who may read this, permit me to quote a single sentence from Liebig's celebrated work upon agricultural chemistry: "The bark and foliage of oaks contain from 6 to 9 per cent of potash. The needles of firs and pines, 8 *per cent*." But it is not on account of the potash exclusively, that I prefer pine straw to all other vegetable matter in the preparation of manure;—since it possesses another invaluable quality above all others, in absorbing the juices of the manure, which are thus saved from evaporation, and readily applied to the land. I doubt not but a single year's experience will convince every intelligent planter of the innumerable advantages of this improvement, and its perfect adaptation to the culture of cotton and other crops.

I will now close this number by a very few remarks upon the character and quality of the soil upon which my experiments have been conducted. It is high ridge land, readily recognized, and its quality distinctly understood, in our southern country, under the name of "*forked-leaf, black-jack, pine-barren*," a deep, porous, sandy, superstratum, lying upon a tolerable good clay, at a distance of 2 to 3 feet below the surface. A true picture to nature, and naturally poor enough. This land, under the treatment above detailed, grew my cotton, from which I have gathered a greater number of pounds per acre, (indeed almost double,) than I have ever seen recorded, is in its natural state, inferior to the average quality of cotton land, by at least one half. I might refer you, if necessary, to more than one hundred gentlemen, planters from Georgia and Alabama, who have examined my experiments carefully, and several of them, at various stages of its growth, and with one general consent, pronounced it a fair test, and a great improvement. I have, from several stalks that grew on the three acres, in the proper places, taken 3½ to 4lbs of cotton, *carefully weighed*. In the perfection of this improvement, yet in a state of great crudeness, when every stalk upon the acre, (2,940,) *shall mature equally well*, what may I *reasonably* calculate to gather?

"————Nil desperandum,
Possunt quia, posse videntur."

N. B. CLOUD, *M. D.*

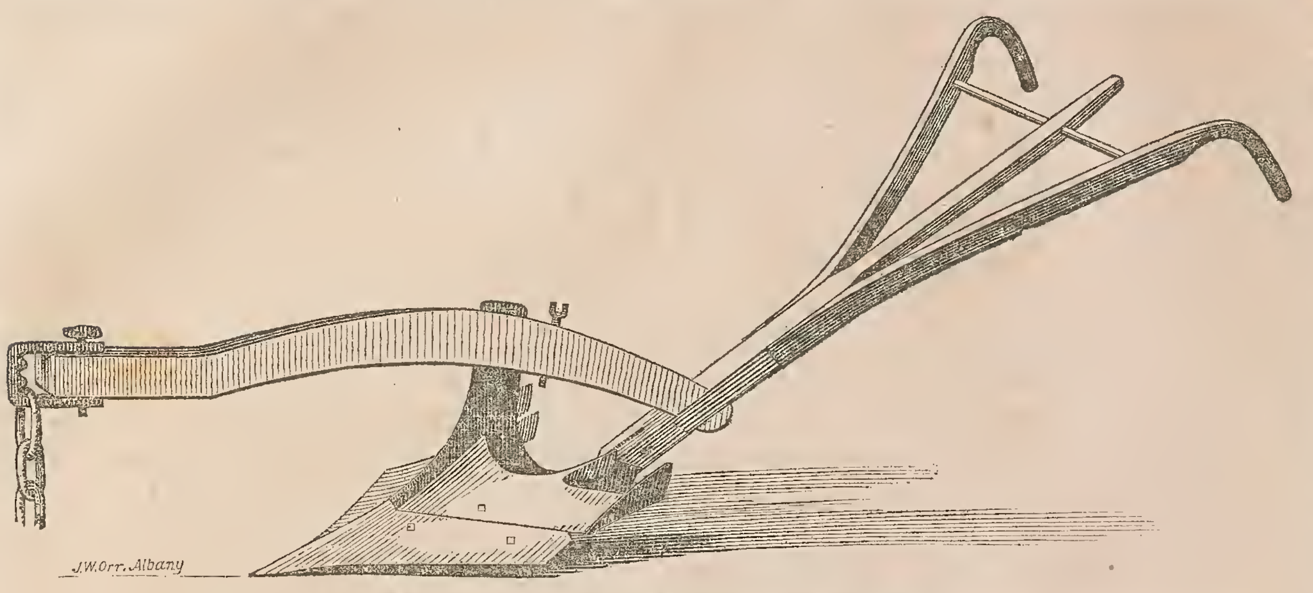
Planter's Retreat, Ala. Dec. 26, 1842.

SUBSTITUTE FOR THE ROLLER.

MESSRS. EDITORS—One of our farmers, Mr. John A. Merselis, uses the following article, instead of a roller, with good effect. He takes a slab, or outside cut from a log, two or three inches thick, nine inches wide, and about seven feet long; a rope is fastened in each end, and then by means of the clevis, he fastens his team to the middle of the rope. If the driver is a heavy person; he uses the flat side down next the ground; if he is a light person, the round side down; going over the field several times, until the ground is sufficiently pulverised; the driver standing on it, to keep it in close contact with the ground. By rubbing over the ground, it pulverises it thoroughly. The past season, I saw two of his fields; one planted with corn, on our Mohawk flats, which looked like a bed in a garden; the rows of corn could be seen across the field, when only an inch or two high. The other was upland, clay and slate gravel, sown with oats, which was equally smooth. I believe when he uses it, he does not previously harrow. He invented it to cover marrow fat peas, which, by harrowing, he was unable to cover. He even uses it to cover his potatoes after planting them. Respectfully yours,

CHARLES H. TOMLINSON.

Schenectady, Dec. 30, 1842.



Langdon's Horse-Hoe or Cultivator Plow.—(*Fig.* 15.)

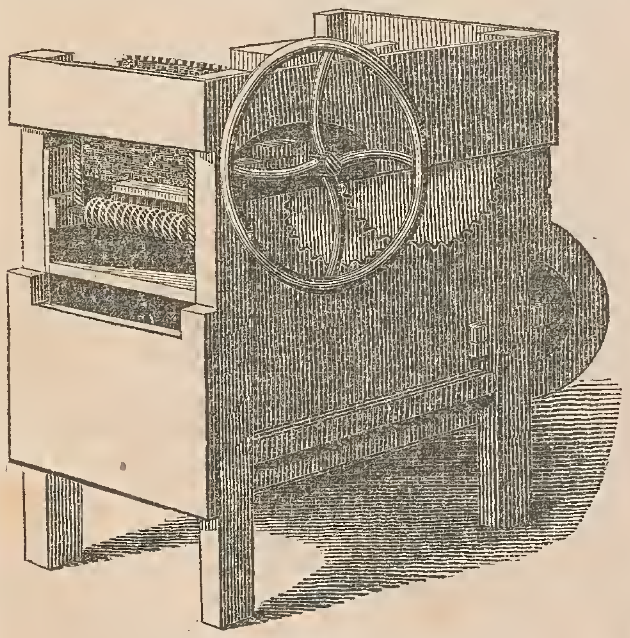
IMPLEMENTS OF HUSBANDRY.—No. II.

It was my intention to have headed this No. with a description of Murray's Corn and Cob Grinder, which was exhibited at the Fair in Sept. last, and to which was awarded the Society's premium; but having failed to obtain a drawing of it, (although I addressed a note to the owner early in Jan. requesting him to furnish one,) must postpone it to a future number.

There were only three Corn-Shellers exhibited at the Fair of the State Agricultural Society,—one by Mr. Thorburn, Albany, Adriance's—one by Geo. E. Waring, Stamford, Conn.—and one by John A. Whitford, Saratoga Springs. A description and pictorial representation of Adriance's machine, with my opinion of its merits, may be found in Vol. IV. p. 93, of the Cultivator. I have had it in use until last summer, and have had no reason to alter my opinion on the subject. Waring's machine I have never seen in operation, but from those who have had it in use, I have always heard it highly commended.

The Corn-Sheller has always been considered a very useful and labor saving machine. The shelling of corn by hand, even with the aid of the handle of the frying-pan, is a tedious and painful operation, and at present, I believe, entirely out of date. The treading it out with horses, or beating it out with the flail have their disadvantages, and are not practiced where corn-shellers can be had.

It is now more than twenty-three years since the corn-sheller was first introduced, and very little improvement on the principle has been made until within a few years; in fact Judge Buel preferred one of the old machines, (Harrison's,) which he used during his life time.



Whitford's Corn Sheller.—(*Fig.* 16.)

The machine from which the above drawing was taken, (the tops and posts removed,) is the invention of J. A. Whitford, of Saratoga Springs, for which the Society's Diploma was awarded by the committee on this description of implements.

The principle appears to be new, and as I have one of them in use, I can speak advisedly. It shells as clean as any other machine, and has the advantage of depositing the cob on one side and the corn at the back-side, like a common fanning mill, into the half bushel, in good order for the mill or market, the chaff being completely blown from it by the fan, as is seen in the end of the above figure; thus saving the labor of passing the corn through a fanning mill after shelling, to prepare it for market. This machine differs from others, as the principal sheller for separating the kernels from the cob is a frustrum of a cone, (which is imperfectly shown in the above cut, in front and at top,) made of cast iron staves lying horizontally, and is surrounded with teeth set in spiral rows. The lower oblique sheller is placed below the main sheller, and nearly touching it, and is composed of a series of small wheels armed with teeth on their peripheries, placed about half an inch apart, leaving a space between them of sufficient distance to admit the bars of a spring concave bed-plate projecting downwards, leaving a space between it and the sheller sufficient to allow a common sized ear of corn, and to keep it between and against the two shellers, where it is held until the corn is completely stripped from the cob by the simultaneous movement of the shellers—the cob escaping at the discharging aperture, and the corn falling through the space which is met by the current of air from the fan, which blows the chaff out at the front.

Without the fanner it requires about the same power as the common machines, but to use it to the best advantage, it should be run with power. They are for sale at the Agricultural Repository of Mr. H. Warren, River-street, Troy. Price $20.

Among the new implements exhibited at the Fair, none seemed to attract the attention more, or appeared to meet the views of the multitude, better than the horse-hoe or cultivator plow, (Fig. 15,) exhibited by B. Langdon, of Troy.

It affords me great pleasure to have it in my power to speak of the merits of this machine from experience, having used one the past season in my corn. My corn ground was laid off in squares planted in the corners, leaving the hills three feet apart, which enabled me to run the horse-hoe both ways. When the soil is tolerably loose it penetrates from two to three inches; the edges being sharp, cut off the weeds, which with the soil pass over the top of the inclined share which rises 3½ inches above the cutting edge of the share, leaving the soil very light and loose. The cutters on the upper section of the share are useful for pulverizing the soil. The breadth of the share from point to point crosswise, is 17 inches, which I find sufficiently wide for rows at 3 feet distance, for it loosens and breaks the soil beyond the reach of the share. After passing through the corn both ways, there is little left for the hand-hoe to do. It is a very efficient machine, and I have the testimony of a number of farmers and gardners who have used it, and all speak in the highest terms of it. I did not try it for digging potatoes as my crop was on a side hill, but those who did try it say it exceeds anything for that purpose which has yet been introduced. When used for earthing up potatoes, the upper sections of the share with the cutters, are removed and wood boards are substituted, which is readily done by means of one screw bolt through the upright part of the share.

Since the foregoing was written, Mr. Langdon has shown me one of his horse-hoes embracing an improvement. By referring to (Fig. 15) you will perceive the improvement consists in extending the cutters beyond the share, by which means the soil will be left very loose and well pulverized. The point of the share, instead of being square or chisel shaped, as heretofore, is now tapered to a point, by which means the roots and weeds which formerly catched on the point and annoyed the plowman, will now be avoided.

It is not generally known, I believe, that Mr. Langdon was the inventor of the horse power ferry-boats, and I will venture to say, one of the most useful discoveries for that purpose, of the age. What kind of an appearance at the present time, would one of the old fashioned scow ferry boats, propelled by human power with immense poles, at a snail's pace, make along side of one of those? In fact it would be necessary to have enough of them to reach nearly across the river at Troy to accommodate the present travel, notwithstanding they have a bridge near by.

I find I am digressing; I will now return to the horse-hoe. The best and most substantial evidence of the estimation in which this implement is held by those who have seen or heard of it, is the amount of sales and the number of orders already received, exceeding the most sanguine expectations of the proprietors. I was informed not long since by Mr. L. that he had received an order for twelve, to go to Chicago or Wiskonsan. The proprietors are induced to put them at the lowest possible price, to meet the pressure of the times, and offer them at $8 complete. They may be obtained of H. Warren, River-street, Troy, or by addressing the proprietors, J. C. & B. Langdon, Troy, N. Y.

Three Hills Farm, Jan. 1843. C. N. Bement.

Note.—In the first number I have stated the price of Baldwin's Corn and Cob Crusher, to be $85. Mr. Thorburn informs me it is only $65.

WINTERING STOCK.

Messrs. Gaylord & Tucker—There is no subject, perhaps, connected with farming, of more consequence than the care and management of stock; and I know of none that in general is so much neglected, or which receives so little attention.

I propose making a few remarks on the manner of wintering stock in this part of the country; and although some of the practices which here prevail may be unknown in your vicinity, yet I trust that a notice of them may not be regarded as useless.

One of the first things which strikes the attention of a New-Englander on coming to the West, is the great waste of grain and fodder in the feeding of animals; and the remark is frequently made, that if these articles of food were used with the same economy and judgment that is practiced by good farmers in the "land of steady habits," there might be kept from twenty-five to fifty per cent more stock than there is now. This remark is unquestionably correct in a general sense, though it should be received as subject to some exceptions.

The manner of wintering cattle varies somewhat in the different sections. In the great Indian corn districts, they are fed chiefly on the fodder of that grain; seldom, or never eating hay. The corn is sometimes husked from the stalk in the field, (the stalks not being cut,) and the cattle are turned in to eat what they choose, or whatever hunger compels them to eat. This custom is liable to many objections. The cattle are commonly allowed to range in the "stalk-fields" at all times, without regard to the state of the weather or the condition of the land. The fluctuation of the climate during the winter months causes frequent freezing and thawing of the land; and when it is muddy or soft, the tread of the cattle is very injurious; it makes the soil into mortar, which, when dry, becomes as hard as a brick, and plants cannot grow in it. Besides, much of the fodder is lost by being trodden into the earth. But perhaps as great a waste as any attending this custom, is the loss of nutritious matter in the fodder by being left to become totally dead; sometimes killed by frost, and the *saccharium* of the stalk (probably its principal nutriment,) wholly dissipated. In this state, it can do little more than barely sustain life. The bark and wood of trees, if the animals can masticate them, will do as well. I have many a time seen animals kept in this way so miserably poor and weak as to be hardly able to lift their feet out of the mud and crawl from one bunch of stalks to another.

A better mode of managing corn fodder, and which the *best* farmers greatly practice, is to cut it up and shock it as soon as the corn begins to harden. It may be cut and well saved so early that the greenness and sweetness of the stalk and leaf will be principally retained. The difference in the value of fodder thus saved and that which is suffered to dry up or be killed by frost is great. If cows that are fed on the latter give any milk it is thin and watery. Butter can scarcely be made from it; if any is produced, it is frothy, crumbling, colorless and worthless, while the cows are as poor as skeletons. On the other hand, cows fed with the green fodder give rich milk, which, if properly managed, will yield butter of nearly as good consistence, color and quality, as if the cows were fed on grass.

But even when fodder is saved in the best manner, a great waste is frequently allowed in consequence of its not being properly fed out. It is too often thrown into the mud, or on to land that is too wet and soft for cattle to tread on. It can be fed to the greatest advantage in mangers, suitably arranged around the barn-yard, where all is consumed that is eatable, and the remainder, if the yard is rightly formed, is converted into good manure. But when the number of cattle is very great, it may be difficult to provide for them all in the barn-yard; and on grounds of almost inexhaustible fertility, as are some of the alluvial lands in the west, there is less occasion to feed in the yard for the purpose of making manure. Instead, however, of feeding on land which would be trodden up and injured by the cattle, a dry and sheltered spot should be selected, with (if possible,) a firm blue-grass sward, which will bear the tread of cattle.

Hay is generally worse managed in this part of the country than I have ever known it in other places. It is commonly allowed to get too ripe before it is cut; being often entirely dead before it is touched with the scythe. But whatever may be its state of ripeness, it is suffered to lie in swath after it is mowed, "rain or shine," till the farmer is ready to put it up. Sometimes he gets ready the first day and sometimes he is not ready under a week. But when the time comes for stacking, it is put up whether it be wet or dry. The consequence is, it "spends well," as they say; for the animals must be driven to starvation before they will eat it; and sometimes they cannot then be induced to eat enough to keep the breath of life in them.

Those only who have had the experience of feeding hay cut while it is in blossom and properly dried without being wet by either dew or rain, can appreciate its value over such musty, strawy stuff as too many call hay.

An idea prevails among many people that clover hay is necessarily of inferior value. This very false notion arises from the bad manner in which it is made and kept. Sometimes the leaves are all gone before it is cut. Sometimes, if it is cut in proper season, it is knocked about in alternate sunshine and shower till the heads and leaves are all gone, and nothing remains that can be gathered up but a mass of dry, tasteless stems; and sometimes it is put into the barn or stack with so much moisture and wet about it that it heats, and all its goodness is burnt up. Pull out a handful that was put up in this way, and you find the heads and leaves reduced to powder, and by a slight rubbing the whole flies off in dust.

Clover, if it stands up well, should be cut while it is in the fullest blossom; or, if it lodges down and begins to sour at the bottom, cut it as soon as this takes place. As soon as the dew or wet is dried off from it, put it into small cocks. Notice closely the progress it makes in drying; it will cure in from two to four days, or longer, according to the state of the weather. Put it into the barn or stack in a fair day, turning over the cocks and opening the bottoms a little a sufficient length of time before loading to dry off the dampness. Clover put up in this way will retain every leaf and head, together with that delightful fragrance which belongs only to such hay properly cured; and when it is fed judiciously, will be found to make as much flesh, milk, or butter, and of as good a quality, as any other hay, pound for pound.

A great loss is sustained in this part of the country from not sheltering animals. They are often fed in the bad manner I have described, exposed through the whole winter to all the vicissitudes of our changeable climate, without any better shelter than the lee-side of a rail fence. Under such exposure, they require much more food to sustain them than they would do were they kept comfortable, and with an abundance fed out, which is either consumed or wasted, they are "dog poor" in the spring.

All animals should have suitable and comfortable shelter. Milch cows should have dry and warm stalls, where each can be fed (without being molested,) as her peculiar condition requires. Horses and working oxen should also be provided for in a similar manner. Horses are generally pretty well taken care of here; but other stock is neglected. Young cattle may be in open sheds with roofs that will keep off the rains, and so arranged as to protect them from the winds. Under these sheds they may be fed in bad weather. Where barns and sheds *cannot* be had, a warm hill side, sheltered by a wood, is a good substitute. Stock of every description should, if practicable, be fed under shelter in stormy weather, and ought never to be allowed to go on to land when it is in such a state as to be cut up by their feet.

But it is objected that stock is so low here that it is not an object to provide suitable food and shelter for them. Stock is very low it must be confessed; and the necessity is so much the greater for keeping it in such a manner that the food consumed and the care bestowed may be turned to the best account.

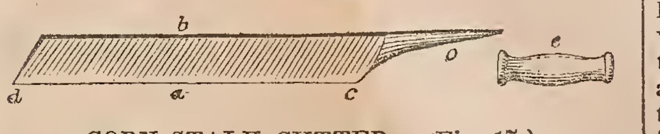
There is one description of animals, however, which it seems to me would, beyond a doubt, return a fair equivalent for some better treatment than they generally receive. At any rate, there can be no reasonable excuse for such inhuman neglect as they are condemned to suffer. I mean milch cows. In the neighborhood of all our large towns, butter commands a fair price; that is, a fair price in proportion to other articles. In this town, those who sell good butter find no difficulty in getting twelve and a half cents per pound through summer, and from that sum to eighteen and three-fourths cents in winter. Cheese also brings a price relatively higher than most farm products. Hence, where dairying is understood, it is reckoned a profitable business. Yet I have often passed by farms in the winter season, where quite large herds of cows and other cattle were kept, and found them ranging on the whole farm, treading up the soil, and gnawing the grass to the very roots, with only a pile of wheat straw to "run to," and nothing worthy the name of a shelter to protect them from the storm.

This part of the country possesses great advantages for keeping stock, particularly sheep; and if a proper system was pursued, *and a steady market could be had*, the want of which by the way is the greatest obstacle to improvement, the business might be made profitable.

Sheep injure grounds less by the tread than cattle; and by taking care to save the latter growth on some fields of blue-grass, or other grass that is not much injured by frost, they can live well through the winter almost entirely by grazing, requiring but little besides, except a small daily allowance of grain. But they should by all means have shelter from the storms. A good shelter may be made very cheaply with rails and straw. But they are here often allowed to run where they please, without being fed or sheltered, and by the month of March or April, half their wool is gone, and the remainder is so full of burrs that it is not worth much.

There are exceptions, to be sure, to such bad management; but I fear that a stranger would say of us—"this is country life in common."

Zanesville, O., Jan. 4, 1843. SANFORD HOWARD.



CORN STALK CUTTER.—(Fig. 17.)

MESSRS. GAYLORD & TUCKER—I send you a cut and description of a Corn-Stalk Cutter, which I think is superior to either of those given in your last volume, or any other I ever saw or heard of. It is what we call a "Corn Knife." It is made of iron laid with steel or all steel, if preferred. In the above cut, the distance from *c* to *d* should be 18 inches, which is the edge of the blade; from *a* to *b*, or the breadth 2 inches; thickness at back ⅛th of an inch, and should be gradually tapered to a thin edge. The shank *o* should be 6 inches long, and should be rather flattened on the sides than square or round or an oval shape; the handle *c* should be slipped on it and firmly clenched. Any blacksmith can make the blade, and any farmer the handle. Here in Kentucky, we plant our corn generally in hills about four feet distant in every direction, three and four stalks in a hill, and with this "Corn Knife," when kept sharp, a hand will cut and stand up in shocks or stooks, of 16 hills square to each stook, two acres per day, and when a picker up follows, four acres per day. One stroke to the hill is sufficient, nor that a hard one.

KENTUCK.

Sharpsburg, Dec. 1842.

VIRGINIA GRASSES.

TIMOTHY.—From the Blue Ridge westward, this grass is preferred to all others; but east of the Ridge it is inferior to several others. This difference of produce is no doubt principally caused by difference of climate, but the deficiency of lime in eastern Virginia, is another cause. It is generally cut only once in the year. Grows from 3 to 4½ feet high.

ORCHARD GRASS.—Where the land is rich, this grass thrives well over the state, and makes good hay if cut when in bloom. I am surprised those of the timothy region do not try this grass, as I am persuaded that the yield would be about double that of timothy, and the hay very nearly of equal quality. Red clover, and green grass, (Kentucky blue grass,) come to perfection about the same time as orchard, and one or both of these should always be sowed with the orchard, for the double purpose of filling up the interstices, and that the orchard may keep the others erect. The orchard grass is cut from two to three times the season. Grows from 3 to 4½ feet high.

HERDS.—The herds grass, or red top, is very common east of the Blue Ridge, and is the only valuable grass which thrives on land which is naturally acid, or made so by stagnant water. It makes excellent hay, but the yield is not great, and is generally cut twice. Grows 2½ to 3½ feet high.

GREEN GRASS, GREEN SWARD, GREEN SWORD, OR KENTUCKY BLUE GRASS.—On land which is really in good heart, and contains a goodly portion of potash, this, when taking into consideration both grazing and mowing, is undoubtedly the most valuable grass in Virginia. It will grow to about the height of two feet, and so very thick, that a blade, common width, cannot enter it. It makes good hay, and the grazing cannot be excelled. It may be cut for hay two or three times the season, then grazed through winter, and yet continue to grow during all mild weather. It is the blade which I would have it understood grows to the height of two feet in rich land, for in such it very seldom puts up a stem and yields seed; but when this does occur, this grass attains the height of three feet. Any land with us which would produce good wheat, will also produce good green grass, by the sowing of ashes or potash; and the sowing of the seed is not required, for the land is already stocked by nature. I have a lot of this grass mixed with clover, which has been cut twice for hay this year, and is now lying on the ground, the blades from ten to fifteen inches long. The stem of this grass has but few joints, and is straight and perpendicular. The color is pale green.

BLUE GRASS.—This grass grows to about the same height of green grass, with a thick jointed and zigzag stem. The color is dark green, tinged blue, and it never fails to produce seed. It grows only on acid clays, and mountain land, made acid by much decayed wood. It makes but indifferent hay, and I am always glad when by dint of licks I can extirpate it.

RED CLOVER, grows well with us, and is as well effected by plaster, as perhaps any where in the Union.

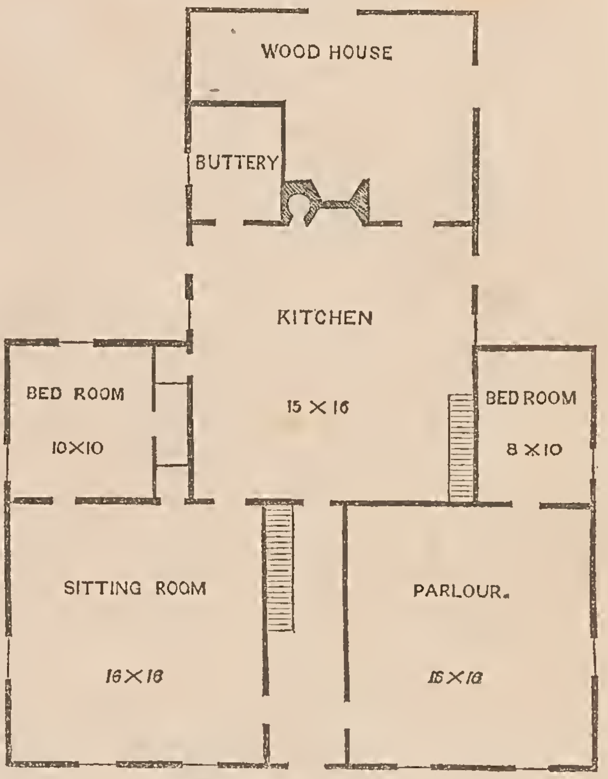
WHITE CLOVER.—This section of country is by nature well stocked with the seed of this grass, and the application of plaster or ashes, or both, will cause it to spring up and grow on any of our lands which are in heart, or has any heart at all. Pity it is, this grass is not more encouraged.

VELVET GRASS.—This grass has got amongst us by being imported with the orchard grass. The color is a pale green, tinged purple, with a purple head, and the whole plant is covered with down, resembling velvet, hence its name. The natural place for this grass is running water. I incline to believe its yield is greater than any other grass known amongst us. Within a few years past I have sowed some 30 or 40 acres with orchard grass, all of which had a mixture of the velvet, and I have noticed invariably that where a bunch of the last mentioned takes near to, or in running water, that it grows most luxuriantly. About five years past, I sowed a lot of 10 acres of ordinary clay bottom with orchard and velvet grass. It all came up well, and grew tolerably the first year; the second year the whole became sickly, and the orchard grass mostly died; and the third year the remains was velvet grass, and that in a dying state. The lower end of this lot was a poor sickly white clay, over which I conveyed a streamlet for improvement. In the running water, the velvet grass has taken firm possession, and is the best piece of grass I ever saw. This grass quickly perishes in stagnant water, consequently for a large meadow, a large quantity of water must be secured; and this must be kept in motion; therefore the meadow must have neither sinks nor absolute levels. Perhaps this grass possesses the power of absorbing and decomposing a large quantity of water, and if so, it must be very valuable, as poor land will suit it nearly, or perhaps quite as well, as that which is rich. This grass springs up as early as orchard grass, may be cut as often, and grows to very nearly the same height. The seeds resemble the orchard grass very much, but differ in this, that if not cut before thoroughly ripe, they will be lost by shattering.

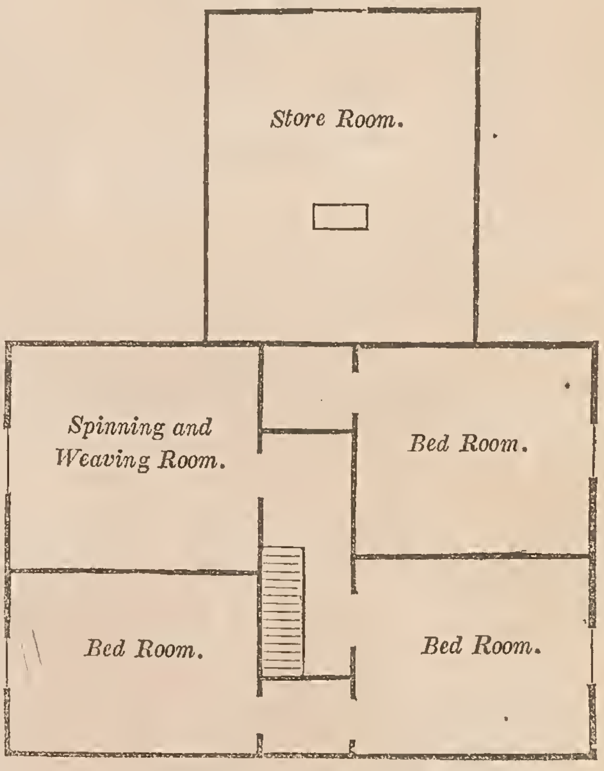
Thus it is seen, that for rich dry meadow, I would prefer a mixture of orchard grass, green grass, and red clover, or any two of them; for stagnant land, herds grass; and for running water, velvet grass.

Amherst co. Va., Dec. 24, 1842. ZA. DRUMMOND.

PLAN OF A FARM HOUSE.



First Floor.—(*Fig.* 18.)



Chamber Floor.—(*Fig.* 19.

MESSRS. GAYLORD & TUCKER—I transmit for your consideration the enclosed plan of a Farm House, which I think both convenient, and sufficiently large for any moderate farmer. It is intended to be only one story and a half, or 13½ feet posts, as that is high enough to admit of persons walking under the eaves, and makes the chambers quite pleasant. The rear to be 16 feet wide, and extended to suit one's fancy. I have not calculated a chimney in the front, as stoves are more handy and cheaper, the pipes to run up through the chamber floors and meet over the hall, where there is to be a chimney. There is a chimney in the kitchen, which affords a fire place, in that and the wood house; the latter to be used as a wash room if desired; a clothes press and two cupboards off from one of the bedrooms—one to be opened into the sitting room, and the other into the kitchen. Stairs to go up in the hall; cellar stair under, out of the kitchen. Kitchen stairs to go to one of the bedrooms, to save going up front stairs. The chamber hall to be lighted from bedroom, by means of glass in the upper part of door. A CONSTANT READER.

Michigan, Oct. 1842.

POTATOES—CUTTING OFF BLOSSOMS.

The following paragraph went the rounds of the agricultural papers last summer:—'M. Zeller, director of the agricultural society at Darmstadt, in 1839 planted two plats of ground with potatoes. When the plants had flowered, the blossoms were removed from them in one field, while those in the other field remained untouched. The former produced 476lbs. the latter only 371lbs.—*Far-*

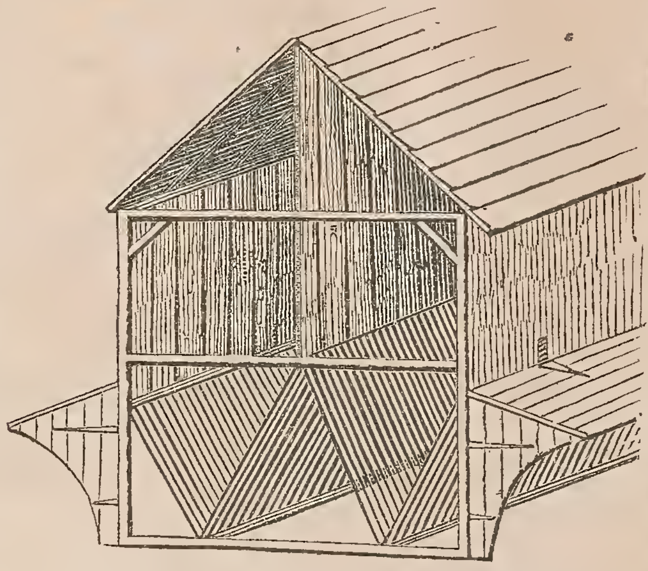
mer's Mag." I tried the experiment, supposing that plucking the blossoms might possibly have some favorable influence, but after measuring the results, no difference could be perceived. J. J. T.

HARD NAMES.

MESSRS. GAYLORD & TUCKER—Permit me to offer your readers some excuses for the use of *hard names*, by writers on agriculture, particularly writers on Agricultural Chemistry, Botany, Vegetable Physiology, &c. The fault seems to be not in the writers who use the terms, but in the readers who complain of them. Suppose a person who cannot read was to receive a letter from a friend; he goes to a neighbor, letter in hand, and commences abusing his friend, the correspondent, for addressing him in terms that he, the receiver, *cannot comprehend*. What would be thought of his complaint ? Now this is precisely the case with those who complain of the hard nanes used in the various branches of science, and especially agricultural essays. The language of science is necessarily an universal language. Were it not so the writings of a Frenchman would not be understood by an Englishman, and so of all other nations—each nation would have its own sciences, from the benefits of which all the world besides would be excluded. Scientific terms, therefore, by general consent of all nations, are given in the Latin language, which is understood in all enlightened nations, and this uniformity of nomenclature is effected. Suppose a different state of things. Each nation uses a language of its own on all subjects in its writings. Nothing but a confusion of tongues equal to that of old Babel, would be the result. As familiar examples only look at the names applied in different parts of the country to some of our plants. TIMOTHY, for example, a very important grass to all of us, you will allow, is called *Herds' Grass* in New England, while Herds' Grass itself is quite a different sort of thing. Now suppose the *botanical* name of Timothy were used, hard as it is, would not the readers of all our public writings, better understand the subject ? There being but *one* true name, all would soon understand it. Chemical terms are of the same character. No man can write an article that will be of the least use, without using what are called "hard names," simply because the science is comparatively new, new principles are discovered and new names for these principles must be used, and without the use of these names and terms, no one would understand what the writer said. Besides, a writer for the public cannot know to what section of the country in the world his writings may find their way—if he knew that his articles on the grasses would go to New England, and no where else, he might with some show of propriety say, "*Herds' Grass*;" or if it were confined to the middle and northern states, he might say "Timothy;" but as he cannot either know or suppose either, he will very properly say *Phleum pratense*, which every body can understand by referring to their books. When agricultural chemists are writing on the subject of manures or soils, they are equally obliged to use terms of fixed and certain meaning. Suppose they were to say *hearts horn*, instead of Ammonia, this would give a very indefinite idea of the thing intended. But if the say Ammonia, every body *may* know what was intended by referring to the books. When a chemist says putrefaction evolves certain gases, and by the addition of certain things, these gases may be fixed, and thus retained for the benefit of the soil, how can he express himself in a manner so that one who knows not even of the existence of such gases, can comprehend him ? There are no *common names* or equivalent terms for any of these principles. Hydrogen gas for example has no common equivalent—no other word expresses the same sense. Carbonic acid gas has been called fixed air, but who would understand the meaning of fixed air better than they would that of the true term. No, gentlemen. Instead of complaining of hard names, let our farmers set to work and learn their meaning, or cause their sons and daughters to be taught them; this is the best remedy, and indeed the only one.

An illustration of the folly of adopting or using common names is given in the case of TIMOTHY. Here is another. The old and well known pest of the farmer, the *Oxeye Daisy*, is known by all the following names in Baltimore county, Maryland, viz: Caton's Pink, Carolina Pink, Jefferson Pink, Richardson's Pink, Maryland Aster, White Daisy, White Weed, Wild Camomile. The persons who know the weed by either of these names, do not know it by any of the others. The consequence is, when the persons who know it by the name of Caton's Pink, see an article treating of the best means of getting rid of the *Jefferson Pink*, they pass over it with the self congratulation that they are not plagued with that pest at least, whilst at the same time their fields are overrun with it completely. Now would it not be better for every body to call this weed by its proper botanical name, "hard" as it is, viz: *Chryslenthemum aucanthemum ?* To conclude, however, with the question I intended to put to those who quarrel about hard names—suppose the school boy was to say to his teacher, "please sir, give me the words in English, Latin words are so hard," what would the teacher of the Latin school think ? S.

P. S.—In my own family I was regularly in the habit of teaching my children the proper botanical names of every plant in the flower garden, of which I had a large collection. The children had no more difficulty in learning these "hard" names, than they would have had in acquiring the common ones, nor half so much, for there are numerous common names to all plants, but one proper name. All this they easily acquired before they knew a letter of the alphabet, and always used these hard names in their common talk with visitors and playmates.



SELF-FODDERING BARN..—(Fig. 20.)

MESSRS. GAYLORD & TUCKER—Mr. J. Horsfied has me fairly on the hip; my only surprise is, that my error has escaped notice so long; it occurred to me a day or two after the transmission of the plan, (p. 147.) I say it occurred to me, for I beg you to understand, that I was not so ignorant, as to suppose that a base of 3 feet of hay would not sustain a burthen of 12 feet width, and proportionate length. My limited experience even, had taught me, that hay had not the mobility of parts, with either gaseous or liquid matter. It was a strange oversight, yet am I in doubt, but that such errors, by exciting more critical observation, and more careful comparison of one's own notions, benefit as much as tolerable schemes wholly correct in their details and proposals. Excuse me for thinking, in the present instance, that an attempt to remedy the error, will be better than an entire renunciation of the plan. I propose the insertion (see fig. 20,) of each longitudinal sill into the transverse, 3 feet from the ends of the latter, (the said posts to stand as represented.) The racks should run from sills in a slant position, to girth under the swing roof. From same sills, (6 feet apart,) racks, rails, or slabs, should fall upon a beam, equi-distant from either sill, and seven or eight feet above them; thus forming a triangular vacant space in interior of barn, which would not be lost; since by hanging doors at either end, it would form a shelter for sheep, or calves, and they could there feed themselves through the racks. Furthermore, scantlings should run from the interior beam to ridge, in order that by mowing the hay on either side, none should rest upon the beam—thus defeating the design. By stripping the covering from one end, the interior is thus partially exposed. (Compare with fig. 86, p. 147, last vol.)

By this it will be seen that the *entire base* (if the cattle do their duty,) will be eaten away; and without a support the hay must settle; a *base* is *de facto* and *de jure*, a support, therefore the hay must settle, the cattle will live, and the tanner will be *hideless*.

Is the syllogism sound?

Salem, Ct. Jan. 14, 1842. D. G. M.

A PROFITABLE COW.

MESSRS. EDITORS—I send you some statements of the production of my cow for publication, hoping it may induce some to reform in the treatment of animals so useful and profitable. We made last spring in one month, from one cow, fifty-nine pounds of butter; commencing the fifth day of May, and ending the fourth of June. Within that time we weighed her milk for three successive days—the whole weight one hundred and eighty-nine pounds, averaging sixty-three pounds per day. Some five or six years ago, in the month of April, we made in twenty-one days thirty-nine pounds and six ounces, besides using milk freely for the family. We also made on another trial of nine months, two hundred and seventy-two pounds, besides using milk for a family of six persons. The cow was ten years old last spring, had a calf at two years old, and has had one every year since; is of the native breed, large size, always in good condition, and has been well kept from a calf, to which cause I attribute a portion of her superior qualities, and extra size; though there must be something "bred in the bone," that gives us yellow butter at all seasons of the year, and milk always nearly, and often quite the whole year. While on her trial last spring, she was fed six quarts of buck wheat bran per day, with what hay she would eat till grass took the place of hay.

Would not all farmers do well to keep fewer cows, and keep them better? is not one well cared for more productive than one poorly fed and attended? is not a warm stable better than the leeside of a rail fence? is not a good bed of clean straw better than one of manure, or can they be as comfortable with thirty or forty pounds of it adhering to their thighs, as if they were kept smooth and clean as in summer ? In short, does not any thing that adds to their comfort, add to their production ?

Such treatment may be objected to on account of expense, but has the objector counted the cost ? Do turneps cost more than hay ? Does bran, or oats, or corn even ? I think not at this time. I see nothing extra, but a trifle of labor and care, and does not the superior condition of the animal pay for that more than four-fold.

Yours respectfully, DANIEL J. CURTIS.

Canaan Centre, Jan. 18, 1843.

COMMENTS ON THE CULTIVATOR FOR DEC.

GENTLEMEN—In answer to your Address "To the Patrons of the Cultivator, and to the friends of Agriculture in the United States," I will take the liberty to predict, that if all are as well pleased with your paper as Commentator has been, and only half as well instructed by it as himself, you will never want ample support; at least, so long as you continue to conduct it with the same good sense and sound judgment for which it has heretofore been distinguished.

In speaking of the animal called the Gopher, you have been misinformed. It is not "peculiar to the country west of the Mississippi," but abounds in Florida, and is common in many parts of Georgia.

The attack of your correspondent Mr. Wm. Partridge, upon Prof. Leibig, seems to resolve itself into a question of veracity, at least for those of your readers who like myself are no chemists. Thus, the latter asserts as a matter of fact, so notorious that it requires no proof, what the former pre-emptorily denies. But Mr. Partridge being fully aware that King Numbers is against him, resorts to the following expedient to destroy the force of this puzzling fact. He very courteously and most modestly compares all the followers of Professor Liebig, amounting probably to many thousands of the most learned men in Europe, to a flock of sheep, and Liebig himself to their Bell-Wether!!

Verily, Messrs. Editors, this correspondent of yours is a rare hand at an argument, whatever may be his chemical and other acquirements, of which I pretend not to judge. And Professor Liebig and Daubeny must take good care *what* and *how* they write, if such an intellectual drawcansir is to have the cutting up of their works.

I hail with pleasure, the return of our worthy friend Solon Robinson, to the pages of the Cultivator. His present communication is characterised by that same strong, sound, practical good sense which has distinguished all his writings. And for all who have determined to cut loose from their old homes in search of new ones, he will prove, as I confidently believe, an excellent guide, both in spirit and in truth.

Your good friend, Mr. S. E. Todd, has found out "nine plausible reasons for subscribing for the Cultivator." Permit me to add a tenth, which I deem something more than plausible. It has contributed greatly towards making zealous farmers, or rather farmeresses, (if I may coin a word,) and horticulturists of several highly estimable ladies, who have been induced thereby, to take much more than they ever did before of that out-door exercise, which is worth all the physic in the doctor's shops for strengthening delicate constitutions, and imparting health to both mind and body. This same service it would render to any others in similar situations, if the perusal of it operated on them in the same manner; and who then would say, that its real value could be estimated in dollars and cents.

The "Workingman's Cottage," by W. R. North, jun. is a very snug, comfortable looking building, and so have been several others of which you have given us drawings from time to time. But as well as I recollect, no estimate of the cost has ever been given in any of the descriptions which have accompanied the drawings. And yet no farmer should build even his house, without ascertaining beforehand, as near as practicable, what he will have to pay for it. This preliminary counting the cost of every thing, is absolutely essential to all agricultural thrift, and he who neglects it will be fortunate indeed, if he discovers his error before it be too late to apply the proper remedy.

I thank Mr. Morrell for reminding me of one of my remarks on a former communication of his, as it furnishes the opportunity to assure him that I did not misunderstand him. Indeed, I think that I now know "the cut of his jib," (to borrow a sailor's phrase,) sufficiently well never to mistake his object, which heretofore has always been a good one; and so I confidently believe it will continue, for men rarely change either their principles or their purposes, after reaching the age to which I suppose he has attained.

And now, Messrs. Editors, having finished my labors for 1842, as a volunteer reviewer of your paper during that period, I must beg leave to say a few words before I bid you farewell, both as to my past and future operations in regard to the Cultivator. If you yourselves and a majority of your readers have approved of what I have heretofore done, I shall feel myself amply rewarded for all the time that my comments have cost me. Nay, more, I shall be encouraged to continue them for 1843. But it is a fixed principle with me never to be intentionally obtrusive. I shall therefore be constantly on the watch for symptoms of disapprobation on the part of your readers; and you may rest perfectly assured that I can be silenced at any time, by a hint far less broad than a certain impudent fellow said he had once received, that his company was disagreeable to a family which he attempted to visit. Upon being asked what the hint was ? he replied that it was nothing more than being kicked out of doors.

With earnest wishes for your success as Editors of the Cultivator, for your constant welfare as private individuals, I remain your old friend,

Dec. 31*st*, 1842. COMMENTATOR.

TO WESTERN EMIGRANTS.

Messrs. Eds. of the Cultivator—Everything connected with the subject of emigration to the west, has become interesting to a vast number of your eastern readers. Enquiries have become so numerous that I propose to answer publicly, the following questions, which, with a great many others have been made to me, and which I now select from a file of letters, a good deal bigger than "a piece of chalk."

I select promiscuously as they come up:

1st. "What is the price of land; can any be bought at government price?" The price of government land is $1,25, payable in specie or treasury notes, at the Land Office in the District where the land lies—a District is from 50 to 80 miles square. The purchaser receives a certificate of purchase, and afterwards obtains a patent from the President. In this section of the state, there is much prairie land now subject to entry, and some timber land, though the best timber is generally taken up, and is held from $2 to $10 an acre.

Many tracts of improved land can now be bought for less money than the cost of making the improvements; because men are in debt and cannot pay without selling their farms.

"Please give me some of the prices of stock?"

Cash prices are low: Horses, $40 to $90; six yr. old Oxen, $35 to $50; four yr. old, $25 to $35 a yoke; three yr. old Steers, $6 to $10, each; two yr. old, $5 to $7; one yr. old, $3 to $5; Calves, $1,25 to $2; Cows, $6 to $10; Sheep, common, $1,25 to $1,75; Hogs, Landpike variety, are so cheap that stealing them is no longer petit larceny; Hogs, Berkshire, and other improved breeds, "just as you can light of chaps," at prices to correspond with the present price of pork, which is from $1 to $1,75 pr. cwt.; Turkeys, 20c. each; Hens cannot be sold by the single one, for we are a centless people, and have no silver coin small enough to express the value.

"What is the price of a variety of farming implements?"

Never heard of anybody in this new world having a variety, unless he borrowed them. Can't answer that question. I guess they are about 50 pr. ct. dearer than at Albany—except Plows. Some excellent ones are made at Chicago and Michigan City, and other places in this region, nearly as cheap as at the east.

"Would it be advisable to bring household goods and kitchen utensils along with us?"

Yes, those that are actually necessary—that is if your route is mostly by water. But you had better bring a wagon, plow, harrow, cultivator, drill or wheel barrow, than a side-board, bureau, bedstead or chairs; but above all things, don't bring the piano; swap it off for a spinning-wheel. We are fond of music, but we want the right kind in the right place. In the winter, a string of sleigh bells, and in the summer, a dinner horn; and I have noticed that a piano in a farmer's house, always effects his daughter's lungs, so that she cannot call her father to dinner with that good old fashioned musical instrument.

Beds and bedding, and abundance of woolen clothing, iron-ware, a small lot of crockery, well packed, tinware, particularly the milk pans, as this is "a powerful" country for milk, and table furniture, and all the "small fixings" about a house, may be brought by the emigrant to advantage. Don't bring lumber, nor pay freight upon articles that you will not immediately want in your new house.

"Would it be desirable to bring grains for seed, and what kind?"

Yes. It is always desirable by way of change and for experiment in a new place. Bring a small lot of every thing that grows for the good of man; and if you don't want them yourself, give to your new neighbors; it will show a good trait of character, and they will repay you for your liberality, ten fold.

"Is it generally healthy?"

This is the most important of all questions. I answer that I do sincerely think the prairie country, generally, is a very healthy one; yet all new countries are subject to fever and ague, and portions of the west, particularly near large streams, have been severely afflicted.

Where I live myself, it is high rolling prairie, and groves, clayey soil, and pure well water, and is decidedly healthy. I believe that all similar situations are equally so.

"Can the dairy be made profitable?"

I will give the data for each one to answer this question according to his own notion of "cyphering."

The price of Cows, I have given. Cost of summer feed nothing but salt. The winter feed will be fully paid by the calf. The price of keeping being only $1,50. The prairie grass produces the best of milk, for butter and cheese. The average price of the former, I think, is about 7c. and the latter 4c. Upon this data, can the dairy business be made profitable, I think, is easily answered in the affirmative.

"What would be the expense of transportation of a horse team on the lakes, or traveling expense by land?"

The passage of a horse from Buffalo to Chicago, is the same as a cabin passenger. Last season, $18. The expense by land for a pair of horses with a moderate load, I think, will average three cents a mile.

"Is the land stony, if so, what kind of stone?"

No, not generally. There are scattered boulders of granite all over the prairies, and some parts of Illinois, for instance at Juliet, 40 miles west of this, the land is underlaid with limestone.

"What kind of wood is most prevalent?"

Oak of various kinds; next hickory. In some places beech, poplar, ash, walnut, sugar maple, &c. &c. abound.

"What is the price of a good farm wagon?" $60 to $100.

"Of harness?" Common double harness, without breeching, $16 to $20. The country is so generally level, breeching is but little used.

"Can good prairie lots be got, and wood handy?"

Yes. There is as good prairie as any man need ask for, now lying in sight of my window as I write, subject to entry at $1,25, and good oak timber within two miles, for $5 an acre.

"Are good common school teachers, in good demand, and at what price?"

Now, if the word "good" governs teachers, I can't tell. The article is seldom found in this market. If the word "common" governs teachers, I would answer that they are tolerably plenty, and common enough in all conscience. The price, $10 to $20 a month.

I think that the west is in need of an importation of *good* teachers of common schools. If they did not meet with good encouragement, it would show an uncommon degree of inattention to the best and only means of improving our condition as a civilized, moral people.

"Can I better my condition by removing to the west? I am blood and bone a farmer. Myself and wife are 43 years of age. We have two boys, 18 and 20; two girls, 14 and 16; two boys, 9 and 11, and two girls, 2 and 5; and we wish to settle where we can keep the family near together. I have a good horse team; good farming tools and dairy utensils, and some good stock, and but very little money?"

Yes; you are particularly well calculated to make a first rate "blood and bone" western emigrant. No matter if you have no money, you can rent land very low, and will soon be in a condition to let land instead of hiring it. I say come on, you and all that are under just such circumstances, particularly if those boys and girls are "blood and bone" farmer's sons and daughters.

"Where is "Lake C. H.?" as I cannot find it on any map."

It is to be found on Colton's map of Indiana. It is the county seat of Lake county, Indiana, the North Western county of the State, and embraces the head of Lake Michigan.

"I suppose the prairies are generally level and the land inclined to wet. Of course the streams are sluggish?"

I suppose no such thing, and of course you are greatly mistaken in each and all of your suppositions. The land is generally gently undulating; sometimes hilly and not inclined to wet, and the streams afford an abundance of excellent mill sites.

"Have you any stone coal?"

Not in this part of the State. The nearest is on the Illinois river, 50 or 60 miles west.

"What kind of people, that is where from, is your section of country settled with?"

Mostly from the eastern states; some Canadians; a good many of the best class of Germans, and a few English and Irish.

"What is the condition of the country as to morals and religion?"

Well, now that's a poser. You forget that it is contrary to the generally received opinion at the east, that either exist at the west. I will allow that some of us are no better than we should be, for we have taken the benefit of the Bankrupt act, and cheated our eastern creditors a little, but we shall pay up, *(when Clay is elected President)* and we do sometimes send you a little spring wheat mixed with winter wheat; but we imagine that you don't know the difference, and ought to be thankful that we don't mix buckwheat. But we always pay our debts, (public ones excepted,) when we can't help it, and we don't get trusted, where we've no credit. Upon the whole, we are a moral people, and if we are not a religious one, it is not because we don't pretend to be.

"Does your country abound in fish and game?"

I am sorry to say it does; because where it is abundant there is always a class of inhabitants that are too lazy to work, who perform twice as much labor in treeing a coon in a hollow stump, or following a tad pole through a swamp, under the idea of catching a fish, as they would in earning a good living off the land, instead of letting their families suffer for food, while they are eternally "out hunting."

In all my hunting and fishing, the greatest game I ever caught was the fever and ague, which if I had kept on dry ground, would never made game of me.

If you ask the question, with an idea of coming here to follow it as a business, I beg you will stay away.

For occasional recreation, I have no objection, and the opportunity for that is good here. Deer, geese, ducks, prairie hens (grouse) and some other kinds are abundant; fish of the best quality, and some very large size, abound in lakes and streams.

Now, here comes a questioner that I am tempted to introduce in his own language. He writes from Delaware:

"*********** I therefore want to know something of your section of country, and the west generally. I wish to move to the west if I could be satisfied that I could make a living for myself and family, easier than I can here, or with a better prospect for the future. Hereabouts, the "skinning system" has been going on so long, that our farms are pretty much in the same situation you say in your traveling memorandum, that the land is near Washington City—to improve it, would cost more than it would come to, and although we manage by skinning the land, to keep our own skins full, it is not so with our stock, for in the spring they often bear a close resemblance to some of Kit Cornhill's wooly breed of horses. Now, can a poor man, in the prime of life, with a healthy wife and children, all inured to labor, *make a living* in your country, and where would be the best place for him to settle?"

I think I have already answered the first part of this question, but I repeat that he can more than "make a living." There is an Irishman in my neighborhood, who last year an abundance of vegetables, and much more raised wheat than he needed for his family, almost entirely with the spade. The "best place to settle" for a poor man, is in any good healthy neighborhood of prairie farms—plenty of such locations in North Indiana and Illinois.

"How many bushels of corn, wheat, oats, &c., can two hands and two horses make in a season, doing other necessary work on the farm?"

That's more than I can tell—don't think the experiment was ever tried in this or any other country where the means of subsistence are so easily procured; particularly when the natural indolence of mankind predominates over the artificial habit of industry. Let every man answer for himself, how much he *can* raise in a rich, loose, mellow soil. Let no man say how much he *will* do.

"What is the average price of grain?"

That question is more feasible. I think in the Chicago market, for the last two or three years, the following is a fair average:—Wheat 60c., Corn 21c., Oats 19c., Timothy seed 1.50., Flaxseed 87½c., White beans 56c., Peas 62½c., Barley 37½c., Potatoes 12½c., Onions 37½c.

"Is your land clay, sand, or black loam?"

Each and all in different places, sometimes on the same farm. The latter is the most prevalent.

"I wish you to state the advantages and disadvantages of your country?"

I have already stated many of the advantages and perhaps shall some more, as other questions arise. One of the disadvantages you may see in a late communication of mine, of a settler who froze to death while crossing a large prairie on a trip to mill. You will also find many other disadvantages that emigrants have to encounter in settling a new country, detailed in my former articles of advice to emigrants.

But the greatest disadvantage of all, is the extreme fertility of the soil. And if you have energy of character enough to overcome this, you will overcome all others, and find more advantages than disadvantages. But don't forget, that in all countries, the ease of procuring subsistence is apt to beget indolence. This is the great and almost only danger in the west.

"What is the wages of farm laborers and carpenters?"

Average $10 a month; 50c. a day. Carpenters $1 a day.

"Is it necessary to clear up your wood land of under growth for pasture?"

In some groves when the country is first settled, there is little or no under growth; but by keeping out the fires, it soon springs up very thick, so that it would be necessary to grub out the under growth. Generally speaking, however, the growth of timber should be constantly and carefully promoted, and then in fifty years there would be more timber in the prairie region than now.

"Is your county well watered?" "Can you get wells easy?"

Yes, to both questions. Where I live, wells are from 15 to 60 feet. The first 5 easily spaded, then a very hard compact bed of clay to within 10 or 12 feet of the bottom, then fine beach sand. Stock water is obtained in creeks, ponds and springs; but as the country becomes thickly settled, a great many farms will have to form basins in the clay after the manner much practiced in Kentucky, or obtain stock water from wells. The water in wells is pure, that is, clear, and very durable. It is generally what is termed *hard*.

Throughout nearly all the prairie region, good water is easily obtained by digging; 90 feet is the greatest depth I know of.

"Which is the best time of year to emigrate?"

If your route lies by way of the lakes, start from the eastern states in May, June, July, August or September, not later. You should arrive at your destination before November, at all events. May and June, are undoubtedly the best months for traveling. In moving, emigrants often suffer great exposure, which they notice but little at the time, but which sows the seeds of fever and ague, which comes upon them in their new home, and makes them discontented with the country, and sometimes drives them back whence they came, when a little more care, prudence and foresight, would have saved a world of misery.

At whatever period you move, be careful of the health of your family. Above all things keep your temper, and you will be likely to keep your health. Don't be in too much of a hurry, and be sure to get ready before you start. That is "the best time to emigrate."

"If I should purchase an entire new tract, what would be the probable expense of a comfortable dwelling and barn, and other preparations for cultivating."

The first breaking up of the prairie is generally counted in the cost of preparation; that is $1.50 an acre; rails, one cent each; count 16 or 18 to every rod, and calculate the expense of any sized lot you wish. A comfortable log cabin with two rooms, can be built for $50. A frame house 1½ stories high, 20 by 30 feet, from $250 to $300. A log barn, 18 by 40, $40. Of course there are several other items of expense that I cannot give exactly here, such as a well, cellar, garden fence, yards, sheds, &c. &c. that cost labor and not money.

And just so with this article. It will only cost you the labor of reading it, and if it does you no good, you have the satisfaction that it did not cost you much money.

And now I again have the pleasure of subscribing myself your old acquaintance and agricultural friend.

Lake C. H. Ia. Dec. 9, 1842. SOLON ROBINSON.

SHEEP HUSBANDRY.

MESSRS. EDITORS—I notice that one of your readers has proposed several questions to me in the Cultivator for the present month, (page 198,) in reference to Paular Merino Sheep, &c.

Allow me to say that Inquirer is right, in the *identity* of the individual of whom he makes his inquiries. And although principally engaged in the duties of my profession, it will afford me great pleasure to add a humble item of information in reference to that truly valuable animal, the sheep. I reply the more readily to *him*, from the fact that I have received within the last two months, many similar inquiries of *individuals* from different parts of the Union.

His first inquiry is in reference to my treatment of my flock generally ?

Answer.—I have sheds for my sheep for winter, with a southern or eastern exposure; low and roomy—boarded on three sides *only;* as I regard it important that the animals have pure air; while it is protected from storms. I have placed under my sheds a layer of earth from 4 to 6 inches in thickness, to elevate the bed of the animal, so as to keep it dry and to absorb the urine; a great part of which would otherwise be lost. This layer, by spring, becomes an excellent manure.

This preparation being made, I put my buck lambs in one lot, ewe lambs in another, breeding ewes in another, &c. I put my buck with the ewes the first of December, let him run with them about 12 out of each 24 hours, until about the first of January, when I take him from them entirely. I tag my sheep about the first of April; wash in clean, running water; shear about the 20th of June, which I consider sufficiently early for this climate; I have known flocks materially injured by the *cruel* practice of early shearing.

I separate my lambs from their parent ewes, about the 20th of August; which I consider beneficial to both.

The second inquiry, is in reference to feed.

My sheep have had during winter, for the last two years, (when they gave 5¼ lbs. of wool per head, as stated in the Cultivator for October,) as much hay, of rather an ordinary quality, as they would eat, and 2 quarts of corn daily, measured with exactness, each 32 sheep, which you will notice is half a gill to each sheep, daily; also, twice a week, a mess of roots, potatoes or turneps, which I regard important for the health of sheep; especially when the ground is covered with snow for a length of time. We feed hay in boxes, and grain in troughs. Commence feeding the ewes some ten days before putting the buck with them, as we regard it very important that they be in a *thriving condition* at that time. In summer, our sheep are kept in a lot by themselves, and their feed is what most good farmers would call, too short. We salt in troughs, and design to keep plenty by them both summer and winter.

Such has been the feed of my sheep heretofore; but I am making some experiments the present winter, with different kinds of feed; the results of which I shall be happy to communicate to the readers of the Cultivator.

The next inquiry is, as to the "comparative profits of the Paular and other varieties of fine wooled sheep, which I have formerly kept."

I am sorry to say I have no data by which I can tell *exactly* in this particular. Your readers can judge in some measure, for themselves, when I shall have made a brief statement.

Some 16 years since, my health became such, as to render it imperious to suspend my labors as a minister, and seek for a time, other employment. About that time, I purchased a flock of 150 merino sheep, such as were *then* common in Vermont, though they were considered rather a superior flock. They and their increase, gave me an average of 3 to 3¾ lbs. of wool per head; until I purchased an imported Saxony buck at an expense of about $100, and subsequently some ewes of the same blood. By this means, the quality of my wool was improved a little; but I soon found that I had a smaller, and much less hardy animal, and a fleece not exceeding 2¼ to 2½ lbs.; notwithstanding I fed quite as well then as now. My loss in sheep during the winter, and lambs in the spring, was very considerable, notwithstanding all my care and efforts.

I finally recovered my health, sold my flock, &c., and returned to my profession; and it is since I purchased my farm in this place, (which I did, for the benefit of an only son, whom I desired to make a *practical* farmer; and who has almost the entire care of our little flock,) that, with a view of placing upon our farm the kind of stock, which would yield the greatest nett profit, I purchased, as stated in the Cultivator for October, the foundation for my present flock of Paular merinos. These are an exceedingly hardy race—large carcass for merino—thick, long wool, and so fine, that the difference between the value per pound, and such wool as I got from my former flock, when they did not average over 2½ lbs. will not exceed from 3 to 5 cents. It is equal to the wool of my first flock, before the introduction of Saxony. The ewes are uniformly good milkers; rarely lose a lamb; and we have not lost but one sheep, except by accident, since commencing with our present flock. It will thus be seen that the Paulars are *much more* profitable, not only in the value of fleece, which is *as much* at least, as 5 to 3, compared with my former flock; but in the proportion of lambs raised, and the comparative loss in sheep by disease.

The last inquiry is, as to the effects of crossing them with other varieties. I am happy to be able to state with the utmost confidence, *uniformly good.*

My brother-in-law Hull, of Wallingsford, Vt., has been selling bucks of this variety for many years; and the more the effects of a cross with these bucks are seen, the more eagerly are they sought; and the uniform testimony of those to whom I have sold bucks, is, that the increase from these bucks, give from 1 to 1½ lbs. more wool than their original stock, with the same keep. With the Saxony, they add greatly to the symmetry of form, weight of carcass, strength of constitution, and weight of fleece; while the quality of wool is but very little injured.

With the coarser varieties, the cross is beneficial in every respect except weight of carcass, with very little dimunition even in that.

Having answered Inquirer, allow me, Messrs. Editors, to say, that the yearling bucks on hand when I wrote you in September, were all sold before the 1st of Nov., that I sent four per canal and lakes to Milwaukie, W. T. purchased by a gentleman who came to examine them at your suggestion; and have the happiness to learn from him, that they arrived in fine condition, and were much admired. I have had a number of applications for bucks which I could not supply.

With sincere desires for your success in the work in which you are engaged, I am, yours,

R. A. AVERY.

Galway, Saratoga Co. N. Y., December 29, 1842.

Domestic Economy.

CURING BACON IN VIRGINIA.

THE following description of the method of curing hams in Virginia, is from a letter from Dr. D. W. BRODNAX, Greenville co., Va., to the Editors of the Cultivator:—"The day after slaughtering, the hog is placed on a bench of suitable width and height, and his head removed; he is then split on each side of the chine, or back bone, so that the chine is left separate from either side; the fleak is then removed, then six or seven of the first ribs, so as to leave but little meat attached besides the intercostal muscles, (these pieces are called "*spare ribs;*") the shoulder piece is then cut nearly square, having no rib attached, some of the muscle being taken from it for sausage meat. The ham is then cut in nearly an oval form, when there are made from each side, three principal pieces, shoulders, middlings, and hams. These pieces are then removed to another table, scrubbed well, first on the skin and then on the flesh side, with salt, a desert spoonful of salt petre being added to each ham and shoulder. They are then packed along the sides of the house, and salt sprinkled over them, to remain here from 4 to 6 weeks, according to the size the of hogs, when they are hung up and smoked every day till they are of a brown color. In the summer they are (or should be,) well rubbed with unbleached hickory ashes, and then packed away in the same kind of ashes, so that no two pieces shall touch each other. The ashes are not lost, for they can be applied to the land when the bacon has been used. Bacon thus prepared will keep two or three years."

MANUFACTURE OF MAPLE SUGAR.

MESSRS. GAYLORD AND TUCKER—You and some of your correspondents, seem to set a high value upon maple sugar, but I am confident none too high for its real worth. I have had much experience in its manufacture, while a youth, and residing with my father and older brother, in your state. They have made, for a number of seasons, as many as 12 and 1500 pounds. I know *well* how it is *generally* made, and I beg leave, through the columns of your paper, to suggest to its present makers, who follow the common mode, three or four improvements, practiced, I believe, by very few indeed:

1. The strictest attention should be paid to cleanliness, in gathering, storing, and boiling the sap; and to this end, (*besides* the usual skimmings while boiling, and straining of the syrup before "sugaring off,") the sap itself, should by all means, be well strained before putting it into the boilers.

2. It should *not* be boiled in common kettles, generally used for that purpose. Their sides, as generally used, become highly heated, while the sap is often rising and falling in the kettle, owing to the unsteadiness of the fire; and when it falls, the sap, scum, &c. adhering to the inside of the kettle burns on, and when the sap rises again, it is melted off, and thus blackens, embitters, and defiles the whole mass in a greater or less degree. To remedy this, if common potash, or smaller iron kettles, must be used, they should be set in an arch of brick, or in one more cheaply constructed of common stone, which any person can lay up, even without the assistance of a mason: and in setting them they should be placed high in the arch, so that the fire will only come at the bottom and a *very small* portion of the sides, and then care should be taken never to let the sap or syrup get so low in the kettles as the top of the arch. This will prevent its burning upon the sides, and being washed off again. Every person can make *this* improvement; and when tried, it will be found a great and a cheap one. It is far better, however, not to use the common kettle at all; best to have a sheet iron vat made with a flat bottom and upright sides, and only 10 or 12 inches deep. Let this be placed upon the top of the arch, so that the fire can reach the bottom only. The evaporation will be far more rapid, and the desired object more certainly attained. The size of the vat should of course depend upon the amount of business to be done; and while it should be only about three feet wide, it may be 10 or 12 feet long. This great length, in proportion to its width, will save fuel; as a fire in the mouth of the arch will heat its whole length.

3. When the syrup is strained and put into the kettle for "sugaring off," there should be added for each pail full, about one pint of milk.

4. The sugar should *not* be run into cakes, but when sufficiently boiled to "grain," let the kettle be set off the fire, and when it begins to cool, the stirring should be commenced with a stick flattened for that purpose. This stirring should be increased in rapidity with its cooling, and toward the last of it, *two men* should relieve each other for a few minutes—stirring it very rapidly, and to the bottom, until it is all perfectly dry and "alive," as the phrase is. This "stirring off," can be finished in about twenty minutes; and when thus "done," cane sugar can never equal it in beauty or flavor.

The kind of kettle here recommended, and this "stirring off" of maple sugar, I *know* by experience, are improvements upon the common method of making it. Why are they not equally applicable to the making of *corn* sugar? I hope they will be *tried* by those who try the latter. ROEDALE.

P. S. Every farmer should have a few maple trees upon his place, in situations, if possible, where they will not shade too much his own, or his neighbor's arable land. This can generally be obtained by placing them along the *south* side of some road or lane. A few trees will afford more sugar than families generally use, and also a very pleasant and agreeable employment for young people, at a time when little else can be done.

USEFUL RECIPES.

MESSRS. EDITORS—Not having seen the following recipes in the Cultivator, I send them; as they are used in this part of the country, perhaps they would be beneficial to some of your numerous readers:

TO MAKE BRILLIANT PAINT WITHOUT OIL OR LEAD.—Take clean lumps of well burnt lime, about six quarts, slack the same in hot water. After the lime has become well slacked, add one pound whiting, one pound sugar, three pints rice flour made into a jelly, and one pound of clean glue dissolved. Have over the fire five gallons of water, into which put five quarts rock salt. The same should be dissolved entirely, by boiling and skimming clean. Pour a sufficient quantity of this upon the lime and other ingredients, to make it the proper thickness to spread well with a paint brush. If made entirely free from lumps, it will look nearly as well as oil paint.

ANOTHER.—To make a paint for roofs of buildings which will render them fire proof, slack your lime as before directed, and the same quantity, then add to the same one pound alum, half pound copperas, and three and a quarter pounds potash; the last to be added gradually. Then add four quarts fine sand or hard wood ashes, and coloring matter, to suit the fancy. Its look will be better than paint, and be nearly as lasting as slate, and *fire proof.* It must be put on hot. It should be made the proper consistency by adding the salt water, as above directed. Old shingles must be first cleaned with a stiff broom, when this composition may be applied. It will stop leaks, prevent moss from growing, and render them incombustible, and last many years.

Clinton Mich. 1842. A READER.

TO STOP BLEEDING.

MESSRS. EDITORS—A few years ago, a valuable carriage horse of mine, took suddenly ill on a journey. A professed farrier in the village in which I was compelled to stop, advised bleeding in the mouth, which was done accordingly. But unfortunately, after the animal had bled more than a gallon, it was found impossible to stop the blood. We all thought the horse would certainly bleed himself to death. At this crisis, a farmer happened to pass by, and directed an application of the *fresh excrement of the swine.* A small portion of this was immediately held on the wound made by the farrier's instrument, and in *two minutes the blood was completely stopped.* I have tried this simple though not very pleasant remedy, several times since, in similar cases, and with the same remarkable success.

Boonsboro', Md. Dec. 20, 1842. J. H. YOUNG.

MAKING VINEGAR.

MESSRS. EDITORS—S. E. T. inquires in your last No. how to make vinegar, and you inform him, and your way is doubtless a very good one; but I can tell him how to make first rate vinegar, with very little trouble:—Take a cask of any size, I prefer a large one, fill it about one-fourth to one-half full, and never to exceed that; place it in the open air, or in the chamber, or cellar. If the *air* can pass over it, fermentation will soon cease; it will lose its spirit, or deaden as some express it, and be first rate vinegar. *Never let your cask be more than half full.* I never knew good vinegar made in a full cask. As you draw out, fill up with cider, and you may always have a supply. Never bung up the cask. I make a practice of cleaning my casks of mother occasionally, and never would I add any to the vinegar. Vinegar makes mother, but mother *does not make vinegar.*

A Constant Reader.

Respected Friends—I can give S. E. T. a receipt for making Vinegar, that is infallible. To every barrel of cider, add one and a half gallons of good whiskey; it will give it strength and body, and the change will speedily be wrought.

R. T. Bentley.

Sandy Spring, Md. 12th mo. 17th, 1842.

Cement for Glass.—The best decidedly that I have tried is common white-lead paint. It is applied to the broken edges, and they are then tied closely together and remain a month or two, when they are found to have firmly adhered.

J. J. T.

The Garden and the Orchard.

THE PEAR TREE.

J. Odell, Esq. of New-York, in a recent letter to us says,—"I lately purchased half an acre of ground near this city, on which was a fine Virgalieu Pear tree.—This, you may well suppose, I prised very highly. It blossomed freely and made a full show of fruit. As soon as they made a little size, they became rusty, cracked open, and every one had a worm in the fruit, which was small and nurly. The attack of the worm I am aware is no uncommon thing, and others in the neighborhood who had trees once bearing fair fruit complain of this black, rusty, cracking, open appearance, the fruit all falling prematurely and worth nothing. The premature falling is of course produced by the worm, but the black rusty appearance with the cracking open is certainly a new thing in the neighborhood which is on Long Island, near the city, and near the water. If, gentlemen, you can throw any light on this subject that the evil may be remedied, you will confer a favor on one of your subscribers certainly, and perhaps on others."

Our correspondent is right in supposing that the premature falling of the fruit of the pear-tree, is owing to the worm. This is the larvae of the pear weevil, *Curculio Pyri,* which attacks the blossom buds, depositing its eggs in them, causing the young fruit to turn dark and fall off when the insect has attained its perfect state, but while the fruit is immature. They sometimes prove friends to the pear-tree by reducing the too great quantities of fruit which in some years loads the tree. If they become numerous they may be destroyed in the same manner as the plain curculio, by placing cloths under the tree early in the spring, while the insect is at work, and shaking or jarring them from the branches.

As to the blight or dark color and defective state of the fruit, two or three causes may be assigned. The first is the attack of a parasytic mould or fungus on the fruit which injures the vitality of the part affected, checks its growth, causes it to crack open, and renders the fruit more or less worthless according to its prevalence. It is a common disease of apples in the colder sections of our country, and to one variety of this disease, is the bitter rot which so much injures some varieties of the apple owing. Another cause, or perhaps only another form of the preceding, is the occurrence of unseasonable frosts after the fruit is developed, not sufficiently severe to destroy it, but to injure its vitality on the most exposed parts, thus stopping the growth of one part without affecting that of the other. The fruit changes its color, and the injured part cracks open. Another cause is thus stated by McIntosh in his work on the Orchard and Fruit Garden: "Root pruning is sometimes necessary when the roots penetrate into a wet, cold, or otherwise uncongenial subsoil, and also when the roots penetrate too deeply even into a good or over rich soil. In the former case are produced canker, cracking of the bark, and skin of the fruit, which latter also become stony or gritty, shedding the fruit at the season of the seeds forming; and in the latter the forming of strong watery shoots, which grow until late, and do not ripen their wood properly in autumn."

Where this is the case, the roots may be shortened and health be restored to the fruit and the tree. As in the present instance the blight or cracked appearance has not been observed before; it is probably owing to atmospheric causes, or the agency of temperature, and therefore not liable to occur again. A very large portion of the apples in some parts of our country suffered last year from a similar cause, being dark colored on one side, cracked and nurly. A knowledge of the character of the subsoil, would determine whether this cause or the one given by Mr. McIntosh, was most probable. In a late number of the Gardener's Chronicle, Prof. Lindley, in reply to an inquiry as to the cause of a similar injury to fruit, gave as the cause a succession of showers, with an increased temperature, after a dry season, which had checked and blighted the fruit.

PEACH TREES.

It is well known that in a large part of the state of New-York, including chiefly the central portion, the cultivation of the peach is scarcely ever attempted, from the frequent or general destruction of the crop by frost. It is believed that in many places this difficulty would be prevented, if instead of planting the trees in low and sheltered situations, elevated and exposed ground be selected. Several facts strongly confirm this opinion. Some years ago, the writer budded a large number of peach trees situated in a valley, and although they were very healthy and vigorous, and the best buds only were selected, more than nine-tenths of the buds were destroyed by winter. Two or three years' repetition of the experiment produced the same result. In other trees, forty rods distant, and the ground from thirty-five to sixty feet higher, treated in successive years in the same way, not one bud in ten was killed. This great difference was owing without doubt to the greater warmth of the low situation, urging a more rapid and succulent growth, and preventing the proper hardening of the wood in autumn—hence the top branches were generally also destroyed. But opposite influences operating on the elevated ground, the growth of the wood was not so rapid, and it became well hardened before cold weather. The increased severity of frosts in the valley, tended greatly to increase the difference.

Thus also when bearing trees are planted in low places, the blossom buds are urged forward by the warmth of day, and the increased severity of night frosts destroys them. But on hills, these extremes of heat and cold do not occur; hence they generally escape. One of the early settlers of Wayne county, near Palmyra, twenty-four years ago planted a peach orchard on a hill nearly one hundred feet above the average height of land; and during twenty years since they first began to bear, he has lost only one crop by frost, while in ordinary situations one crop in four or five is destroyed.

When the soil on hills is unfavorable, it should be properly improved, or large holes be dug and filled with suitable materials. Cold, wet, or spongy soils, should be avoided.

There are of course exceptions to these rules, but as a general guide, wherever frosts are more severe in valleys than on hills, the latter will be found far better suited to the culture of the peach, and the crop be far more certain.

J. J. T.

CATERPILLARS ON APPLE TREES.

Messrs. Gaylord & Tucker—In this vicinity, the past season, the caterpillars have been very numerous and destructive on our apple trees. Owing to the dry and favorable weather about the time of their spinning, we shall have enough next year, if let alone, not only to eat all our leaves from the trees, but to take possession of our houses for a cocoonery; as they walk in without knocking, some trouble will be necessary to keep such numbers out. The number of eggs for the next year's crop, exceed all calculation. They are deposited about the 1st of July. The other day I found ten clusters of eggs on two small branches of one tree; each would have furnished worms enough for a good sized nest. They commence eating as soon as creeping, and spoil the shape of many fine leaves before their nests are visible. I am quite sure there would be a saving, to have these clusters of eggs all off and destroyed, thus preventing any damage. It is quicker done when found, but not so easily found as the nests; but they can be found, most of them, without specs, especially after the leaves are off. The farmer could hardly devote a few leisure hours to better purpose. He has six or eight months to do it, and is hardly excusable to let any nests appear; and if a few do appear, can he be excused unless they immediately disappear? I had a curiosity to know whether the perfect insect was a butterfly or miller; but no one could tell me. I have ascertained. On the 8th of June, I enclosed in a glass case, several caterpillars of full size, that were traveling in search of a place to spin their cocoons; the next day, two or three commenced winding. (Did any one ever reel these cocoons to test the quality of silk?) In twenty-two days, out came the perfect insect, an inch or more in length, three-eighths in diameter, wings close to the sides of the body, color reddish brown; lived but a short time, and moved only in the night. Their eggs may be found in clusters of hundreds, near the end of the limb, well glued on, covering it nearly round, three-quarters in length; the end of each one touches the bark; light colored, sixteenth of an inch in length, diameter less than a pin, shell very hard, and packed close. Over the whole is a thick coating of a dark shining substance, apparently water proof. Here they remain till spring. The warm weather that brings out the leaves, hatches the eggs also; the worms take up their line of march towards the trunk, until a branch puts off; there they make their nests, and are ready to devour as it comes out, all the foilage.

Coxsackie, Sept. 6, 1842. M. Quinby.

BLACK RUST ON PLUM TREES, &c.

Messrs. Editors—I differ from your correspondent P., in the manner of exterminating the "Black Rust," which infests Plum Trees. His direction, (if I understand right,) is to "cut the limb off." The method which I practice is, to shave the excrescence close to the wood, being particular to scrape out every particle of the watery substance, and cover the wound with wax, and it will soon heal over. In this manner the limbs can all be saved and the health of the tree preserved.

The Peach Tree.—I have tried an experiment in manuring the Peach tree with the light and friable substance that collects under the floors of barns and other buildings. The trees on which the experiment was made, were standing in the same soil, and of equal thrift. The quantity applied was a bushel to each tree, and the effect is quite apparent. The trees which had this dressing, sent out large and vigorous shoots, while those without, the limbs were smaller and of a more yellow cast. This substance contains a considerable quantity of saltpetre, an article necessary in the cultivation of the Peach.

Yours truly,

Lawrence Smith.

Middlefield, Mass. Aug. 8th, 1842.

MANURING THE VINE.

Messrs. Gaylord & Tucker—It appears that many facts, considered as new discoveries by the moderns, were well known and practiced by the ancients. When I read in Liebig, "that the best manure for vines, was the leaves and cuttings, cut into small pieces and buried at their roots," I considered it a modern discovery, and was not undeceived until my daughter pointed out to me a proof of a similar application being directed by Mago, the Carthaginian, who wrote about two thousand three hundred years ago. I will quote from Liebig and Mago, that your readers may judge how much has been lost to the world by the dark ignorance of past ages.

"On the manuring of the soil in vineyards," (Liebig, p. 347,) "I cannot omit the opportunity of again calling the public attention to the fact that nothing more is necessary for the manure of the vineyard, than the branches which are cut from the vines themselves.

"My vineyard has been manured in this way for eight years, without receiving any other kind of manure, and yet more beautiful and richly laden vines could scarcely be pointed out. I formerly followed the method usually practiced in this district, and was obliged in consequence to purchase manure to a large amount. This is now entirely saved, and my land is in excellent condition."

"These branches were used as manure long since in the Bergstrasse. M. Frauenfelder says—

"I remember that twenty years ago, a man called Peter Muler, had a vineyard here which he manured with the branches pruned from the vines, and continued this practice for thirty years. His way of applying them was to hoe them into the soil after having cut them into small pieces.

"His vineyard was always in a thriving condition; so much so indeed, that the peasants here speak of it to this day, wondering that old Muler had so good a vineyard, and yet used no manure."

Democritus and Mago praise a north aspect for the vine; because they believe it bears most in this situation. But in goodness it will not surpass others.

"In the planting of vines, let the sides of the trenches be lined with small stones. For these, says Mago, keep out the wet in winter, and in the summer the moist and damp from the roots. This writer is of opinion, that the *pressed out grapes,* mixed with dung, strengthens the seed laid in the earth, because it draws new roots; but this in wet and cold weather warms at the proper time, and in summer nourishes the young vines, *and makes them fruitful.* If, however, the soil in which the vine is set be poor, then must rich earth be found and put in the trenches."

"For the pruning of the vine, once every two years suits very well. The best time, however, as Mago says, is the spring, before the shoots become long, because, being still full of sap, they may be easiest and most evenly cut, and they do not oppose the sickle.

"Mago, the Carthaginian, adds also to the rule for setting the vine: that the seed being planted, the trench should not be immediately filled up, but half of it left to the following year; by which, he says, the roots of the plant are forced to strike downwards."

Wm. Partridge.

New-York, Jan. 10th, 1843.

Peach Worm—Tar—A neighbor informs me that the application of hot tar to the roots of peach trees, effectually excludes the worm. The earth is removed for a few inches down, and the tar applied. It is not intended of course to *destroy* the worm, but to prevent its entrance in trees yet unaffected.

J. J. T.

Inquiry.—I have in my front yard a young tree of the common black mulberry covered every year with catskin, but no fruit. I have grafted and budded from fruiting trees, without succeeding in the operation. Will one of your horticultural friends point out a way to change it so as to produce fruit?

J. Jones.

INCREASE IN THE WEIGHT OF CATTLE.

There are some farmers inclined to doubt the entire correctness of the inferences we have drawn, from the weight of the animals now sold at the Smithfield markets in London, and the Brighton in this country, that the weight of animals had nearly doubled within the last fifty years, but we think there can be little doubt of the fact. Mr. Norton, of Berwick, Mass. has furnished Mr. Colman the weights of some fat cattle killed in that place in 1790, and also some of cattle killed in 1841. We condense the results.

1790.	
Hatch Ox, Total weight,	361½ lbs.
Perkins Ox, "	511
Hussey Cow, "	321
Emery's Oxen, 508—459	967
1841.	
C. N. Cogswell's Cow,	772
C. N. Cogswell's yearling Heifer,	562
C. N. Cogswell's 2 years old Heifer, live weight,	1174

Such instances as these, might be multiplied to any extent; and they prove conclusively the benefits of careful breeding, and the existence of an improved husbandry.

Veterinary Department.

DISEASES OF SWINE.

EDS. CULTIVATOR—I wish to enquire of some of your correspondents, through the medium of the Cultivator, relative to a complaint with which my hogs are afflicted, hoping thereby to gain some information which may be beneficial in the future treatment of hogs similarly afflicted, if I should ever be so unfortunate as to have others thus diseased.

Some six weeks since, one of my fatting hogs—a *barrow*—died. I discovered that it was ailing about eight and forty hours previous to its death. It appeared to be considerably swollen the whole length of its urinary passage, and hinder parts, accompanied with a weakness in its loins. Nothing passed it as I could discover from the time it was observed to be ailing; and died in the greatest apparent agony that I ever saw a dumb beast. Its great effort appeared to be to void its water. Upon opening it, a whiteish jelly like substance was found upon both sides and the whole length of the urinary passage; the flesh much inflamed, and apparently bloodshot.

About three weeks since I killed my fatting hogs. Four of them—*barrows*—of the same litter with the one which had previously died, as above described; the remainder being of another litter. Three, out of the four, upon dressing them, we found to be diseased, similar in all respects, as to place and appearance with each other, and similar to the one which died; though in a much less degree. The diseased part was located about two inches above the orifice of the urinary passage, and upon the left side thereof. It appeared to occupy a place about the size of a dollar, of a yellow cast, and filled with hard kernels about the size, and very much resembling kernels of corn. I had not discovered that these hogs were ailing. They fattened well. Whether it was the incipient stage of a similar disease with which the one died, and would ultimately have caused their death, of course it is impossible for me say. These facts alone would not have made me very inquisitive upon the subject, though I thought them rather singular at the time, were it not for the further facts that I now have nineteen pigs about four months old—ten *boars* and nine sows—and about ten days since I discovered that all the *boars* were more or less diseased in their urinary passage. They cannot freely void their water. It appears to collect near the orifice of the urinary passage, and causes a swelling about the size of a hen's egg, which, if but gently pressed the water will spirt out at the natural opening without difficulty. The opening does not appear to be closed. The pigs eat well, and do well. The complaint is exclusively confined to the *males*. They are of the Berkshire breed, and all, the one which died, and those which I killed, and the pigs I now have, are the pigs of the same boar. I have enquired of my oldest neighbors and farmers, and all say they never have seen or heard of any thing of the kind before. If you, or any of your correspondents, can give any light upon the subject, I should be much gratified to see it in the Cultivator. It will then not only enlighten me but others who may have hogs thus diseased. And as the Cultivator has now become the farmer's text book, and book of reference, whatever is known upon the subject above mentioned should have a place upon its pages. D. B. C.

Canaan, Jan. 2, 1843.

TO CASTRATE SWINE.

MESSRS. EDITORS—Let a hand catch him by the hind legs, throw him on his left side, put his foot on his neck, and pulling his legs forward, press them to his belly; then placing your right foot on his tail, grasp the testicle firmly in your left hand, and make an incision quite through to, and nearly the whole length of it, when it will pop out. Then taking hold of the naked testicle and raising it up, run your knife through the membrane, (which extends from one end of the testicle to the other,) near the string or fore end of it, and cut out to the end next you. Then with your knife, scrape the string down and cut it off, leaving 3 or 4 inches of the string attached to the testicle, then let your pig loose, without tying, greasing, tarring or any thing else. If the operation is performed skilfully, according to these directions, there is not the least danger, and the animal minds it so little, that unless you were to see the wound or blood on his legs, you would scarcely know that any thing had happened. I do not think that the practice recommended by "Richmond," in the Dec. No., is sound, unless in the case of old animals. It is remarked by surgeons, that the wound which bleeds most profusely, (unless so much as to entirely prostrate the system,) is less liable to prove fatal and more easily healed. And I suppose the reason to be simply this: the evacuation by the wound lessens the circulation, in the parts especially, and in the system generally, thereby reducing it and rendering it less liable to inflame. Now, if as advised by "Richmond," a ligature is applied to the artery, scarcely an ounce of blood would escape from the animal by the operation. In my opinion, the ligature never should be applied unless where there is danger of bleeding to death, and in swine this danger never does exist, if the operation is skilfully performed. I have castrated swine by hundreds, from five days to five years old, and never in a single instance, applied the ligature, nor to my knowledge, lost a single case, except it were ruptured before. As to the practice of applying salt and ashes to the fresh wound, (a custom of "Richmond's" neighbors, which he so justly denounces,) it is not only useless, but injurious and outrageous, and the man who is guilty of such conduct, deserves, I was going to say, the like treatment. KENTUCK.

RELIEF OF CHOKED CATTLE.

MESSRS. EDITORS—In looking over the articles of your January No. I learned a novel method of relieving choked cattle; one too that may prove fatal in the hands of some one less fortunate or skilful than your correspondent. It is not, I believe, known among farmers that an ox or cow may be relieved in one minute from the danger of death and anguish of pain produced by a potatoe or any other body lodged in the œsophagus or passage to the stomach, by an operation so simple that any boy in his teens may perform it, without the least danger to the patient. Take a common carriage whip, the butt or handle end of which is an inch or an inch and a quarter in diameter, and smooth; let an assistant raise the head of the beast to be operated on, so high that the lower jaw will be parallel with the lower part of the neck; thrust the butt into the mouth and push forward boldly but steadily, till you have pushed the potatoe or substance into the stomach. I feed my cows potatoes without cutting, as I have no fears of their being injured by choking, the remedy in that event being so simple. I have performed it several times, and would advise your correspondent, Mr. Otis, to try it, should ever an occasion require it, before he tries the more dangerous one of tapping; and he will be convinced that his remedy is neither "surest, most expeditious," or "safest." H. D. E.

Port Byron, Jan. 20, 1843.

SPAYING.—We have received from L. BISHOP, Esq. of Symth county, Va. the following account of the process adopted in spaying pigs by Rufus Rouse in that neighborhood. It differs in some respect from the directions given in the January No. (1842,) of the Cultivator:—

"Fix a plank three feet high. Lay the pig upon the right side on the plank, with two persons to hold the fore and hind legs, and mouth. The implements used are a sharp pocket knife and a long crooked needle, with cutting awl-blade edges, and a strong waxed thread. The operator takes his knife and shaves off some of the hair 3¼ inches from the hip bone; he then makes an incision crosswise, so that he can introduce one finger to bring out the uterus; he then cuts off the whole of the uterus and throws it away; he then enters the needle on one side of the wound and brings it up through the other, and secures it with a strong knot. One stich is sufficient. A mixture of tar and hogs' lard is used to smear the wound. This mode of operating is the invention of Capt. Rouse, and I am in favor of the plan; considering it more safe and less troublesome than the former methods."

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AGENTS FOR THE CULTIVATOR,

IN THE PRINCIPAL CITIES.

Boston—Eben. Wight, Druggist, 46 Milk st.
Hovey & Co. Seedsmen, 7 Merchant's Row
Providence—A. H. Stilwell, Bookseller
Hartford—E. W. Bull, Druggist.
New-Haven—George Sherman.
New-York—Dayton & Newman, Booksellers, 199 Broadway.
Utica—Wm. Bristol, Druggist.
Rochester—Samuel Hamilton, 8 Buffalo st.
Lansingburgh, N. Y.—A. Walsh, gratuitous.
Philadelphia—Judah Dobson, Bookseller.
D. M. Landreth & Co. Seedsmen.
Pittsburgh—R. G. Berford, 85 Fourth st.
Lancaster, Pa.—J. Gish.
Baltimore—Dr. G. B. Smith.
Washington City—F. Taylor, Bookseller.
J. F. Callan, Seedsman.
Richmond—R. Hill Jr. & Co.
Alexandria, D. C.—Bell & Entwistle.
Charleston—D. M. Landreth, Seedsman.
St. Louis—E. P. Pettes.
Augusta, Geo.—Wm. Haines, Jr.
Nashville—A. Fall.
Jas. A. Creighton & Co. Periodical Agents
Louisville—James George, Ag. Warehouse, 4th st.
Montreal, L. C.—Benj. Brewster.
Toronto, U. C.—Eastwood & Skinner, Booksellers.
Halifax, N. S.—C. H. Belcher, Bookseller.
St. Andrews, N. B.—G. F. Campbell, Esq. P. M.
St. Johns, N. B.—T. H. Wentworth, Esq. P. M.

☞ ADVERTISEMENTS on subjects of interest to the farmer and gardner, will be inserted in the Cultivator at the rate of $2.00 for 100 words, for a single insertion.

PITT'S THRESHING MACHINE.

THE subscriber has left Albany, and located at Rochester, N. Y., where he will continue the manufacture of his machines for Threshing and Cleaning Grain. All letters for him, should be addressed to Rochester, N. Y.

Rochester, Dec. 26, 1842. JOHN A. PITTS.

SITUATION WANTED.

AN English Farmer, who understands his business well, and who has been seven years with one of the best farmers of this state, will be disengaged on the first of April, when he wishes to obtain a situation for himself and wife, who is well qualified to take charge of a Butter Dairy. Good references will be given. A letter post-paid addressed to JAMES KEAN, Albany, will be promptly answered. *Jan.* 25, 1843.

THE WORKINGMAN'S MISCELLANY,

AN occasional publication of Addresses, Lectures, Biography, and compenduous works on the useful arts and sciences. This is emphatically an age of cheap literature, and it is only to be regretted that so little of the useful is mingled with the flood that pours from the press. It is proposed to remedy this deficiency by publishing in a cheap, but neat form—after the manner of the English edition of Griffin's Scientific Miscellany—such Lectures, Addresses, &c. &c., as may be deemed of value and interest. These, it is proposed to issue occasionally, under the above title, so as to be sent by mail at periodical postage. The first of the series, a Lecture on *The condition and true interests of the Laboring Classes*, by E. G. Squier, in a neat pamphlet of 16 large double column octavo pages, with printed cover, is now ready, and for sale at the office of the Mechanic in this city. Price 6 cents, 20 copies sent by mail to any part of the state for $1, post paid. The next in the series will be 3 Lectures to the Laboring Classes, by the late Wm. E. Channing, to be followed by others from the pen of Everett, &c., of all of which, together with the prices, due notice will be given.

☞ All orders accompanied by the cash, addressed, post paid, to the publishers of the Mechanic, Albany, or to the publishers of the N. York Tribune, N. York, will be punctually attended to Liberal deductions to agents.

POUDRETTE AS A MANURE,

MAY be had, a superior article, in barrels of four bushels each. This manure has been used extensively on Long Island, in New Jersey, Connecticut, and other states, for several years past, and has been found an excellent fertilizer. A barrel, four bushels, is considered equal in fertilizing properties, to sixty bushels of yard manure, and is peculiarly convenient for garden purposes, as there are no foul seeds in it. Present price, $5, for three barrels, or $15, for ten barrels. Orders containing the cash, will be promptly attended to, if addressed to D. K. MINOR, Agent,
Jan. 25. 3t. 118 Nassau st. New-York.

☞ Shares in the company may be had at $110, which will entitle the holder to one hundred bushels a year, for 16 years.

STRAYED

FROM the pasture of the subscriber, on the evening of the 31st day of August last, one blood bay mare, with star on the forehead, and a small scar on her right arm, just above her elbow. She is about 15 hands high, and straddles with her hind legs when she trots.

Also, one lighter bay mare colt, one year old last spring, with large star on her forehead, and one white hind foot. They passed Hartford Bridge, and were seen on the old Hartford and Farmington road, about three miles east of Farmington, on the afternoon of the 1st of September, which is the last I have heard of them.

If any person seeing this advertisement, can bring to their recollection, having seen at any place, or in the possession of any person, such mares as either of the above, and will give me information regarding either or both of them by mail or otherwise, shall be rewarded, and all charges paid.

East Windsor, Ct. Jan. 1843. HENRY WATSON.

ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase, will receive such instructions as will enable them to cultivate the grape with entire success. (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c that they will generally ripen well and produce good fruit, when planted in most of the northern, all the western, middle and southern states.

New-York, Jan. 25, 1842. 2t.

WARREN'S IMPROVED PATENT HORSE POWER AND THRESHING MACHINES.

THE undersigned would respectfully call the attention of Farmers and Agriculturists, and dealers in Agricultural Implements, to these machines. The readers of the Cultivator the past year, must have extensively noticed the satisfactory recommendation *as to their superiority for general use, taken in connexion with their simplicity and low price.*

Having therefore had a full and fair test during the past season, as to the *efficiency* of these machines, and their *adaptation* to the wants of farmers generally, as well as their *suitableness in price* with the "times," the undersigned are encouraged and warranted in extending their arrangements, so as to introduce them extensively throughout the Union. It will be recollected, the price for these machines, is for a two Horse Power and Thresher, only $75; and for a one Horse Power and Thresher, only $60. Terms, cash on delivery.

Knowing that money is scarce in many parts of the country, with those who need these machines, and who would be glad to procure them, the undersigned feel desirous to meet this necessity; and will therefore suggest that they are willing to receive consignments of produce, when the parties cannot pay cash.

The undersigned would also now give notice, that they are prepared to act as agents for the sale of all kinds of approved Agricultural Implements. L. BOSTWICK,
J. PLANT,
New-York, Feb. 1, 1843. 58 Water st

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

Cult. Vol. X.—No. 3. ALBANY, N. Y., MARCH, 1843. Cult. & Far. Vol. IV.—No. 3.

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GAYLORD & TUCKER, EDITORS.

LUTHER TUCKER, PROPRIETOR.

One Dollar per annum—Six Copies for $5.

(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and 25 per cent commission on 100 or more.

Subscriptions to commence with a volume; and the money to be sent free of postage.

THE BACK VOLUMES OF THE CULTIVATOR,

Handsomely stitched in printed covers,

Can be furnished to new subscribers—Vols. I. II. III. IV. at 50 cents each, and Vols. V. VI. VII. VIII. IX. at $1. each.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

MONTHLY NOTICES.

☞ Communications received the last month, as follows:—J. M. E., Wm. Partridge, Levi Durand, E. H. Northrup, H. N. Gillett, A. R. M'Cord, A Young Farmer's Nos. 1, 2 and 3, S. Howard, A. of the North, J. C., Jas. Gowen, G. L. Beckwith, B. J. Goldsborough, G. Butler, B. Swift, E. Townley, A. Hampton, C. N. Bement, Geo. Woodfin, S. W. Jewett, H. A. Parsons, L. Physick, G. B. Smith, L. Smith, S., Cephas, J. W. A. Saunders, Experimenter, A Subscriber.

☞ We cannot refrain from expressing the gratitude due to our numerous friends, for the great number of valuable communications with which they continue to furnish us from month to month, thus enabling us to sustain, to its full extent, the high interest which has given to the Cultivator an influence and a circulation hitherto unequalled by any publication devoted to the useful arts. We would also render to those who have so successfully used their exertions to obtain subscribers for the present vol., our hearty thanks. It is only by such efforts on the part of our friends, in the midst of the general falling off, on account of the "hard times," that we can hope to retain any thing near our former number of subscribers.

☞ The valuable papers of Mr. Smith on the Use of Guano, and of Mr. Physick, on the culture of Indian Corn, shall appear in our next, as also those of Mr. Goldsborough and Mr. Darling. We cannot decide upon the publication of the Nos. of "A Young Farmer," until the whole series is received. It may be necessary to condense them in some degree, in order to give them a place, and this we think may be done without injury, when all the papers shall have come to hand.

"Q. E. D."—We should be pleased to publish the communication of "Q. E. D." were it not for the difficulty we find in making room for the mass of matters, coming more strictly within the range of subjects to which the Cultivator is specially devoted, which are constantly accumulating on our hands. For the same cause, we have been obliged to lay aside several valuable papers, during the past year—papers which, under other circumstances, we should gladly have published.

☞ We are indebted to Henry Watson, Esq. for a copy of the "Transactions of the Hartford Co. Ag. Society for 1842."—To Hon. D. D. Barnard, M. C., for various Public Documents.—To Geo. Vail, Esq. Troy, and Alex. Walsh, Esq. for copies of Mr. Van Rensselaer's Address before the Rensselaer Ag. Society in Oct. last.—To Edmund Ruffin, Esq. Petersburg, Va., for a copy of the 3d edition of his "Essay on Calcareous Manures." This edition of this valuable work is greatly enlarged and improved, making a super royal octavo vol. of 320 pages—price, bound in flexible covers for mail conveyance, $1.25, or $5 for five copies.—To R. H. Wilson, Esq. for Prof. Pendleton's Address at the first exhibition of the Ohio and Brooke Ag. Society, held at Wheeling, Va. Oct. 19, 1842.—To. E. P. Langdon, Esq. for the 13th Report of the Condition of Common Schools in Cincinnati.—To I. R. Barber, Oxford, Mass., for Proceedings of the N. E. Silk Convention, held at Northampton, in Sept. last. This pamphlet gives abundant evidence of the certain though slow progress of this important branch of business.—To H. L. Ellsworth, Esq. Com. Patent Office, Washington, for parcels of "Valparaiso" and "White blue stem Wheat," to both which we shall give a fair trial. Also for a copy of his Annual Report to Congress, embracing a variety of statistics and papers of great interest to the agriculturist, and to which we shall have occasion hereafter frequently to refer.—To. Maj. J. B. Dill, Auburn, for an Address before the Cayuga Co. Ag. Society, at its annual meeting, Jan. 10, 1843, by H. S. Randall, Esq. of Cortland—a very appropriate and well written Address, alike creditable to its author and the Society before whom it was delivered.—To some unknown friend for Mr. Watson's Address before the Clinton Co. Ag. Society.—To the Editors of the *New Farmer's Journal*, London, for the files of that valuable paper for January.

Board of Agriculture.—Mr. Dickinson, chairman of the Committee on Agriculture in the Senate of this State, brought in a bill on the 20th ult., entitled "An Act to Promote Agriculture," which, 1st. Amends the Act, passed May 5, 1841, so as to make that act permanent, instead of for five years.—2d. It requires the Agents of the State prisons to employ so many of the convicts as can be advantageously employed, in the manufacture of silk.—3d. It provides for the appointment by the Legislature, of eight persons, one from each Senate District, who, with the Secretary of State, shall constitute a Board of Agriculture—the said Board to meet annually on the first Tuesday of Jan., and is authorized to require annual reports of the condition of Agriculture from the several Agricultural Societies. The members of the Board to hold their offices for three years, and not to receive any compensation for their services.—4th. It directs that one copy of the series of the Natural History of this State, now in course of publication, shall be transmitted to every town clerk in the State, to be and remain the property of the town, and to be loaned under such rules as the officers of the town may establish; and also that a copy of said work shall be furnished to each college and academy in the State, and to the American Institute. That this bill will receive the hearty approbation of the Agriculturists of our State, we cannot doubt; and we trust that it will, with such amendments as may be found necessary in its details, receive the sanction of the Legislature.

Mr. Colman's Tour.—We are glad to see that the subscription for the proposed work of Mr. Colman, is rapidly increasing. The Philadelphia Society for the promotion of Agriculture, at a late meeting, subscribed for forty copies. A subscription is left at the office of "The Cultivator," in which we shall be glad to enter the names of those who may wish to become subscribers.

Johnson's Farmer's Encyclopedia and Dictionary of Rural Affairs.—Carey & Hart, booksellers, Philadelphia, have commenced the republication of this valuable work, which was published in London in monthly parts during the years 1841-2. This edition is to be "enlarged, improved, and adapted to the United States, by A Practical Farmer," and if the editor performs his work well, will prove a valuable acquisition to the American agriculturist. It is to be published in 16 semi-monthly numbers, 64 pages octavo, at 25 cents each, making the price $4 for the volume, which is less than one-third the cost of the English edition. The first number is now before us. It is introduced to the reader by a well written introduction from the American editor, and ornamented with a lithographic plate of three Short Horn Cows, copied from a steel plate, engraved by Landseer, for Steven's "Book of the Farm." It is printed on fine paper, and got up in good style, and our only regret is that the publishers have not given us the Short Horns in as beautiful style as they appear in the plate from which they are copied; and we cannot but believe they would find it to their interest to substitute steel plates, in the style of the Farmer's Magagine and Farm Book, for the lithographic prints.

The North American Review.—The leading article of the Jan. No. of this work, is a just and well written review of Downing's volumes on "Landscape Gardening," and "Cottage Residences." It also contains a number of capital papers, of which we may mention "The English Abroad," "Calderon's Life in Mexico," "Gray's Botanical Text Book," "Charles Dickens," &c. &c. Boston, published quarterly by D. H. Williams.

"The Prairie Farmer."—The Union Agriculturist at Chicago, has taken the above name, and appears in a new form and dress. So far as we could judge from a hasty glance at the first number, a great improvement has been made in its appearance. Before we had an opportunity of looking it over, it was taken from our office without leave, and much to our regret. Will friend Wright please send us another copy? and also Nos. 5, 10 and 12, of vol. 1, of the Un. Ag. and the Iadex to vols. 1 and 2.

The Southern Cultivator is the title of a semi-monthly journal, of which we have received the first No. from Augusta, Ga. J. W. & W. S. Jones, publishers, at $1 a year.

Corn-stalk Sugar.—In December last, we received a number of inquiries from Mr. Wurmser of Hamilton, O., on the subject of making sugar from corn stalks, which we forwarded to Mr. Webb of Delaware, in the hope that he would favor us with answers; but as he has not, we shall in our next number give such information as we can obtain in answer to Mr. Wurmser and some others who have asked for information on this subject. A. P. Wightman, Esq. of Granville, O., informs us that he and some eight or ten others, made an effort last year to make sugar from the corn stalk. He says: "We obtained first rate molasses, but only a little of it crystalized. We think it would be a good business, and of vast importance to this whole western country, if some method could be discovered to make it crystalize readily."

To W. J., *Bardstown, Ky.*—The price of Barnaby & Mooer's side hill Plow is as follows:—No. 3, $10—No. 4, $10,50—No. 5, $11. Coulters, if wanted, laid with steel, $2—wheel, $1—extra shares, 50 cents. To be had of the inventors at Ithaca, N. Y.

Cutting Roots.—Mr. B. Swift, of Washington, Dutchess Co., informs us that he has made a machine for cutting all kinds of roots that the farmer wants to feed, at the rate of 1½ bushels per minute—the crank turned by hand. It is simple and substantial, and can be sold at from $10 to $12. In answer to his question, we would state that there are now several machines for this purpose, one of which is described by Mr. Bement in another part of this paper; and that the success of his, will of course depend on its merits in comparison with others. We believe but few of these machines are sold, as they are but little known as yet.

Leaf Hay.—In looking over a parcel of letters a few days since, we found a communication, received in 1841, from our highly valued correspondent, Za. Drummond, Esq. of Virginia, which was mislaid at the time of its reception, in which he says that he had gathered and packed away, moderately salted, about four tons of leaves, which he had no doubt his cows would eat freely. If not eat, they were to be used as litter, and thus converted into manure. Will Mr. D. please inform us as to the result of his experiment in using them for fodder?

Sowing Corn and Clover.—P. F. Wislar, Esq. of Columbia, Pa., in a letter of 28th Jan., says:—"The weather has been mild here. I last week plowed a five acre orchard to the depth of ten inches, which I intend early in the spring to sow broad cast with Indian corn and clover seed. No experiment of the kind has as yet been made in this neighborhood."

South Carolina.—The Governor of this State, has appointed Edmund Ruffin, Esq. the talented ex-editor of the Virginia Farmer's Register, to make an agricultural survey of South Carolina. The duty could not have been placed in better hands.

Rice.—A subscriber asks—"Cannot some of your southern readers give us an article on the most improved method of cultivating Rice? As this grain is an important article of consumption, I think an article on its cultivation would be acceptable to your readers." We should be glad to receive such an article, and trust that some of our southern friends will answer this call.

Townley's Patent Premium Bee Hive.—In a letter from Mr. Edward Townley, the patentee, 75 Thompson-st., New-York city, we have the following description of this hive:—"My hive is composed of two apartments, lower and upper; the bees are swarmed in the lower apartment; there the queen lays her eggs, there the nurse bees do their work; there they lay up honey sufficient to keep them through the winter; in short, it is their nursery, their dining-room, their palace, and their home. The upper part of the hive contains the boxes where they lay up their surplus honey for you, and which you may take as fast as they are filled, and put empty ones in their places. I have taken 40 pounds of honey from one hive which was made in 28 days; the hive setting in my house in the center of the city of New-York. Families in general, in cities or towns, might have a hive of bees and raise honey for their own consumption. I have a hive setting in my parlor, which makes more honey than my family eats. These hives certainly have a decided superiority over all hives now in use; and are generally preferred above all others, especially for economy and profit. They are easy to manage, from the perfect simplicity of their construction; and the happy effects produced by the wire screen bottom in ventilating the hive, and in keeping out the bee moths, and for maintaining an equal degree of temperature. I have a number of different kinds of hives which I intend to bring before the public in due season. I shall give a description of my observatory hive in the next number of the Cultivator." (See advertisement.)

NEW-YORK STATE AG. SOCIETY.

At the regular meeting of the Executive Committee, at the office of the Cultivator, on the 2d Wednesday of February, the following members were present: Messrs. Bement, Hillhouse, McIntyre, Prentice, Tucker, and Walsh.

On motion of Mr. Tucker, the President, Mr. Sherwood, and Mr. Langworthy, were appointed a committee to prepare the Premium List for the present year, and also to fix the time for the next Fair.

The Reports received from the several County Agricultural Societies, were laid before the Board by the Rec. Secretary, and on motion of Mr. Bement, were referred to Mr. Tucker, to be condensed and arranged for publication.

The following letter from Sir Charles Gordon, Sec'y of the Highland and Ag. Society of Scotland, was read:

Highland and Agricultural Society's Hall,
Edinburgh, Dec. 23, 1842.

Sir—I had the pleasure of receiving your letter of 15th June, last, with a copy of the Transactions of the New-York State Agricultural Society for the year 1841, for the Highland and Agricultural Society of Scotland.

I laid your letter and the Transactions, before the first meeting of the Board of Directors, and before the first monthly meeting of the Society for the season. The Transactions, which contain valuable papers, were examined by the members with much interest, and I have the pleasure to prefix an official acknowledgment for the present.

I was instructed to convey to your Executive Committee, the thanks of the Board, for the obliging offer they make, to afford information on American Husbandry. The Highland and Agricultural Society witness with great satisfaction, the active spirit evinced for Agricultural improvement in America. This improvement must necessarily be greatly promoted by the numerous agricultural associations, and by your various agricultural publications, some of which the Society regularly receives. I am, Sir, your most ob't serv't,

Charles Gordon, *Sec'y.*

Luther Tucker, Esq. Sec'y N. Y. S. Ag. Society,
Albany, N. Y.

☞ The next meeting of the Executive Committee, is to be held on the 2d Wednesday of March, at the Society's Room, in the old State Hall. The next meeting of the *Farmers' Club*, will be held at the same time and place.

PREMIUM CROPS IN NEW-YORK.

Below we give, in a somewhat condensed form, the statements of the several gentlemen to whom were awarded Premiums on Field Crops, by the N. Y. State Ag. Society, at its late meeting:

Indian Corn—*First Premium—122 bushels per acre.*

On the 23d of May, 1842, I plowed up one acre of green sward, for the purpose of planting it with corn. After plowing it once, I harrowed it well, lengthwise of the furrows. I then marked out the ground so that the rows and hills should stand precisely two feet apart either way. On the 25th of the same month, I planted it, and was careful to put precisely three kernels in each hill; when it was large enough, I hoed it, and continued to hoe it three different times. No other tool was used in the process of hoeing and cutting up the weeds, but the hoe; being very careful to keep the weeds and grass down as much as possible, and in hoeing, to leave the ground as near level as possible each time.

I permitted the corn to stand until it was fit for harvesting, without cutting up or topping.

Between the 10th and 15th November, I began to husk it, and also to weigh the said corn. I found the aggregate weight from the said acre, in the ear, 13,286 lbs., of a good quality.

About the first day of January, 1843, I thrashed out all the sound corn that grew on said acre, and measured it in a sealed half bushel, and weighed it, and found that it fully held out 60 pounds to the bushel, and it produced me one hundred and twenty-two bushels of good merchantable corn. My team and man were occupied one day in plowing the said acre; half a day harrowing; 2 days labor, planting; and 6 days labor, hoeing; and 6 days labor, harvesting, threshing, and weighing.

122 bushels corn, at 37½ cents,	$45.75
Expenses,	14.00
	$31.75

Ira, Cayuga co. Jan. 1843. Sam'l Phelps.

Indian Corn—*Second Premium—89 bushels per acre.*

Luther Tucker, Esq. Secretary of N. Y. State Ag. Society—I send you a statement of my crop of Indian corn, the present season. The land on which it was raised, is a warm gravelly soil, and has not had any manure applied for six years. It had been pastured for the last six years, until fitting for the present corn corp. The 30th day of April, carted and spread upon said piece, nine loads of straw manure, and plowed under. May 2d, carted and spread upon the remainder of said acre, eleven loads of straw manure, and plowed under. May 5th, carted and spread upon the furrows, ten loads of rotten manure, and harrowed lengthwise of the furrows. May 9th, planted said piece; rows three feet apart each way. The 24th of May, plastered and ashed it, at the rate of ten bushels to the acre—nine of ashes to one of plaster. June 6th, went through with the cultivator each way. June 7th, hoed said piece, but not the corn, for the frost had cut about three-fourths of it level with the ground. June 24th, went through with the cultivator both ways. June 25th, hoed it again. July 12th, went through with cultivator both ways. July 13th, hoed it the third time. July 15th, sowed on it one bushel of plaster, broadcast. September 17th, cut it up at the roots, and put it in stooks. Oct. 1st and 3d, husked and weighed the entire crop, which amounted to 8,540 lbs.; then weighed 500 lbs. and put it by itself. Dec. 6th, weighed it again, and it weighed 391 lbs., making in the whole, on the 6th of Dec., 6,678 lbs. According to the weight of Dec. 6th, there would be eighty-nine bushels of corn, allowing seventy-five lbs. to the bushel. Seventy-five lbs. of ears of corn will make fifty-nine lbs. of shelled corn—or according to the first weight in Oct., allowing seventy-five lbs., there would be one hundred and thirteen bushels and sixty-five pounds. The amount of corn fodder was four loads on said piece.

Cost of Cultivation.

Plowing, one day,	$2.00
Harrowing, one half day,	1.00
Thirty loads of manure, and drawing,	9.50
Seed corn, 12 quarts,	37½
Planting, two days,	1.50
Hoeing, seven days,	5.25
Nine bushels ashes,	1.12
Two bushels plaster,	25
Cutting and shocking, two days,	1.50
Husking and weighing, seven days,	5.25
Horse and hand, with cultivator,	1.00
	$26.74½
89 bushels, at 37½ cents,	$33.37½
Expenses,	26.74½
	$6.63

Volney, Oswego co., Dec. 28, 1842. Wm. Ingell.

Mr. Osborn's Statement.

Five Acres.—My corn ground was a clover ley of three years standing; had been mowed two years; never had much manure if any. Plowed but once, dragged and rolled. The corn was planted May 10th, and 11th, in drills about 3½ feet apart. The corn was much injured by the wire worm and a severe hail storm. The expenses of the crop were as follows:

125 loads manure, at 25 cents,	31.25
8 loads of muck,	2.00
3 days raking manure in furrows,	1.50
8½ days plowing,	17.00
1½ days dragging and rolling,	3.00
2 days planting with drill,	1.50
2 bushels seed corn,	2.00
1 day planting over corn, and seed,	75
8 bushels plaster, sown broadcast, and sowing,	1.50
24 days hoeing,	18.00
3½ days with cultivator,	3.50
12½ days cutting and stooking,	9.38
36 days husking and securing,	27.00
2 men, and team, to stack stalks,	4.00
	$122.38

Equal to $24.47½ per acre.

Product.

429¾ bushels at 37½ cents,	$160.97
Stalks, equal to 4 tons hay,	20.00
	$180.97
Expenses,	122.38
Profit, ($11.56 per acre,)	$57.59

Joseph F. Osburn.

Port Byron, Dec. 16, 1842.

Barley.—*Mr. Wright's Statement.*

1st. Soil in good condition at the commencement of cultivation, composed of clay and gravel. Plowed twice, seed harrowed in.

2d. Previous cultivation, once plowing for spring wheat, and harrowed in after corn upon the sward; twenty loads of manure from the yard, at the time of sowing the spring wheat; product, twenty-five bushels per acre.

3d. About twenty loads of yard manure used the present season.

4th. The quantity of seed, three bushels of two rowed barley: sowed the 10th of May, broadcast.

5th. Harvested as follows:—Mowed; lay in swarth two days; raked and put in cocks, and carted to the barn next day.

Expense of Cultivation.

20 loads of manure, and carting, 2s.	$5.00
Plowing twice,	1.50
3 bushels barley, 3s.	1.13
Harrowing,	50
Harvesting, carting, and threshing,	3.50
Interest on land, at 7 per cent,	3.50
	$15.13
Product, 53 bushels, 38½ lbs.	$21.50
Straw,	2.00
	$23.50
	15.13
Profit,	$8.37

Vernon, Oneida co. Dec. 1842. N. S. Wright.

Barley.—*Mr. Vandeveer's Statement.*

My barley was sown upon land in potatoes last year, once plowed and harrowed, at the rate of about three bushels per acre. Estimated expense:

Plowing, harrowing, and sowing,	2.00
Seed,	1.88
Harvesting and threshing,	3.00
	$6.88
Product, 40 bush., 14 quarts, at 40 cts.	$16.09

T. J. Vandeveer.

Amsterdam, Mont. co., Dec. 1842.

Statement of the method of cultivation, &c. of one acre of Rye, raised by Israel F. Goodwin of Westmoreland, Oneida co.

Soil, a deposite from red rock formation, with muck, and a minute portion of clay, and perhaps sand; in high condition; no manure this nor the preceding year. In oats last year; plowed once; 70 bushels to the acre.

Seed, 1½ bushels,	$1.13
Sept. 1st, sowed, plowed once, 1 day,	2.00
Harrowed twice, half day,	1.00
1½ days, reaping,	1.50
Threshed and cleaned, by hand,	2.50
Interest on land, $40 per acre,	2.80
	$10.93
Amount of crop, 32 bushels and 36 lbs. This was a choice specimen of grain, and was sold principally for seed, at 75 cents per bushel,	$24.38
Deduct expenses,	10.93
Profit,	$13.45

Mr. Vandeveer's Statement.

My rye was sown on oat and pea stubble; soil, a yellow loam.

Once plowing,	$2.00
Harrowing and sowing,	1.50
Harvesting and threshing,	5.00
	$8.50
Product 28 bush. 29 quarts, at 75 cents,	$21.04

Amsterdam, Dec. 1843. T. J. Vandeveer.

Oats.—*Mr. Phelps' Statement.*

In obedience to the rules, regulations, and requirements, of the New-York State Agricultural Society, and for the benefit of all who are engaged in agricultural pursuits, I make the following statements:

On the 10th day of May, 1842, I had 30 loads of manure drawn upon one acre of land, and spread it evenly, or nearly so, and on the 16th day of same month, I plowed the acre well, and harrowed it thoroughly, and sowed five bushels oats on said acre, and dragged them in. The whole time of plowing and harrowing, was two days; two days harvesting and securing said crop of oats, and four days threshing, cleaning up, and measuring the same; producing therefrom, *one hundred and two bushels* of first quality merchantable oats.

In the same field, I sowed one and a half acres to oats, *without manuring.* I took full as much pains plowing, harrowing, and securing the grain from this one and a half acres, as I did on the said acre. I sowed on this piece, four and a half bushels, and it produced me but eighty-five and a half bushels; clearly showing to my mind, that the greatest benefits always arise from a liberal use of manure, if put on the ground in a proper state of fermentation, and especial care taken to distribute it over the surface evenly.

Ira, Cayuga co. Dec. 1842. Sam'l Phelps.

Statement of Oats raised on one acre of land, by Wm. A. Russell, of the town of Salem, county of Washington, and state of New-York.

The soil is what is generally termed a clay loam; has been in potatoes for the last five years, with the exception of one year, when it was sown to oats; has had a top dressing of about fifteen loads of manure, well rotted, per year, except this season. None the present year. Sowed about the 25th of April, two bushels and three pecks of seed, common oats. Land plowed once, and harrowed with a square harrow, and crossed. Grain reaped between the 1st and 10th of August, yielding fifty-eight dozen and six sheaves of oats. Threshed about the twentieth of September, producing by actual measurement, ninety-seven bushels and four quarts; that being the quantity grown upon, and the product of one acre. The expense of cultivation is as follows:

One day's work plowing, sowing and harrowing,	$2.00
Half day harrowing and sowing,	1.00
Seed, 2¾ bushels,	1.03
Reaping, raking and binding, and carting to barn, 4 days,	3.00
Half day for team,	1.00
	$8.03

Oats.—*Mr. Sheffer's Statement.*

The soil on which my oat crop was grown, is Genesee flats, a dark clay loam. The land had lain to meadow fourteen years previous to 1840; in the fall of 1840, it was plowed; in the spring following, corn was planted, and produced fifty bushels per acre. Plowed again in the fall of 1841; and in the spring of 1842, it was harrowed once, then sowed, two bushels of black oats per acre, on the 13th April; after which it was harrowed twice, and afterwards rolled with a heavy roller; 15th June, they were 12 inches high, and were mowed by cutting to within 5 or 6 inches of the ground; 10th to 20th of August, they were harvested by reaping; after which they were hauled, stacked, threshed, and cleaned, by one of Pitt's separators.

Expense of the Crop.

6 days plowing in the fall,	$10.50
2 days harrowing, 1st time, spring,	3.50
Furrowing into lands, and sowing,	1.25
Harrowing twice, 4 days,	7.00
Rolling, one day, 2 teams,	2.75
Mowing in June, 3 days,	2.25
22 days reaping,	16.50
15 days binding and stouting,	11.25
8½ men, and 4½ teams, hauling and stacking,	10 88
32 days with men, and twenty-one with horses, threshing, cleaning, and measuring,	34.50
	$91.40
Value of the crop, at 15 cts. per bush.	$130.69
20 loads straw, at $1.00 per load,	20.00
	$150.69

The average yield per acre of the above crop, is 91 bush. 28 lbs. GEORGE SHEFFER.

Wheatland, Dec. 1842.

PEAS.—*Mr. White's Statement,*

Of raising a crop of marrowfat peas, the season of 1842. The condition of the land, green-sward. It had been mowed and pastured for the last eight years. The field contained about three acres or more, as near as I could judge. The ground was plowed seven inches deep, which is the common depth when I turn green-sward. The quantity of seed sown, was ten bushels. They were sown upon the furrows, then harrowed the same way that it was plowed, and then corner ways, minding to turn back the sods that were torn up. There was no roller, bush, or manure, used on the ground. Time of sowing was the 13th day of April. Cutting and drawing them in, was the 20th, 22d, and 24th days of August. The time of threshing and cleaning one acre, the 1st of December. Number of bushels, 33¾, measured. At the time of cutting the peas, I went and measured off from one corner of the field, one acre, and staked it out, so that they could be by themselves. When we drawed them in, we put them separate from the others; threshed and cleaned separate. The expense of cultivating, harvesting, threshing, cleaning, and seed, for the whole piece, is twenty-two dollars. GEORGE WHITE.

Rutland, Jefferson co. Dec. 1842.

POTATOES.—*Mr. White's Statement,*

Of raising a crop of Pinkeye Potatoes, the season of 1842. Previous cultivation of the soil: In the spring of 1840, I turned over about 2½ acres of green-sward, on which I raised wheat. The following season I plowed it but once, and then sowed it to barley, and worked it sufficiently with a harrow, intending it for mowing. But owing to the dry weather in the spring, the grass seed failed. It was not plowed in the fall, on account of the grounds washing; no manure used. The present season plowed once about seven inches deep, and then I drawed on twenty loads of yard and stable manure per acre, and then it was spread and harrowed. I then took the horse and plow, and run the furrows just three feet apart, and the potatoes were then dropped in the furrows, about two feet apart; potatoes cut, and three pieces put in a hill. The quantity of seed, twenty-five bushels. The quantity of land, one acre, one rod, and eight-tenths rod. The time of planting, the third day of May. Time of harvesting, the 26th, 27th, and 28th days of September. Number of bushels, 421¾. The expense of cultivating and harvesting the above crop of potatoes, is fifteen dollars and thirty-eight cents. GEO. WHITE.

POTATOES.—*Mr. Sheffer's Statement.—1 acre and 20 rods.*

The soil on which my crop of potatoes was grown, is Genesee flats, a dark clay loam. The land had lain to meadow, six years previous to the potatoe crop, and about one ton of hay was cut per acre, previous to the potatoe crop. 35 loads of stable and yard manure was applied in April, which was made the previous winter. The land was plowed once, the latter part of May; then rolled, then harrowed thoroughly, then furrowed 3 inches deep, and 3½ feet apart into rows, and planted the last days of May, and first of June, 30 bushels of Rohan potatoes, cut so as to average 3 eyes to a piece, and dropped in the furrows one foot apart, and one piece of potatoe in a place, after which they were covered with a hoe, 4 inches deep. They were hoed twice, the first time a cultivator was used, and then followed with a plow and hoe. The first hoeing was done when the potatoes were about 3 inches high; the second time, when the potatoes were 12 inches high, by plowing, and after hoeing. The crop was harvested the last of September, and first of October, by digging in the usual way with a hoe.

Expenses of Crop.

35 Loads manure, at 2s.	$8.75
Seed, per bushel, 1s.	3.75
Plowing, 2 men, and 4 horse team,	2.63
Rolling, harrowing, and furrowing, 1 day,	1.75
Planting and culling seed, 4 day's work,	3.00
Cultivating and plowing, first time,	1.25
Hoeing, 3 day's work, first time,	2.25
Plowing, second time, man and horse, half day,	63
Hoeing second time, 3 day's work,	2.25
Digging, 5 day's work,	4.38
Man with team, 2 days, hauling,	3.50
	$34.14
Value of the crop at 1s. per bushel, 451 bushels, and 28 lbs.	$56.35

The average yield per acre, on four acres, 401 bushels, 10 lbs. GEORGE SHEFFER.

Wheatland, Monroe co., Dec. 1842.

BEETS.—*Mr. Sheffer's Statement.*

The soil on which my crop of sugar beets was grown, is Genesee flats, a dark clay loam. The condition of the land before planting this crop, was good; the crop previous, was potatoes, thirty loads of manure was put on to the acre, the crop three hundred and fifty bushels. Twenty loads of well rotted manure per acre, was then applied to the land, in the fall, and plowed in. The fifteenth of May, commenced plowing a narrow land on one side of the field, rolled and harrowed immediately, while the ground was moist; then planted in drills 27 inches apart, five lbs. seed to the acre; the seed was soaked in soft water until they were sprouted, then rolled in plaster. During the season, the crop was hoed three times. The first time the plants were thinned out from 10 to 12 inches apart; the second time the ground was hoed, and all the weeds cut; the third time a light plow was used, and afterwards the hoe. The crop was harvested the last of October, and first of November, by digging with a spade.

Expense of the Crop.

20 loads of manure, 2s. per load,	$5.00
Plowing in the fall, three-fourths day,	1.31
Plowing in the spring, three-fourths day	1.31
Rolling and harrowing, 1 day,	1.75
Hoeing first time, 8 day's work,	6.00
Second hoeing, and transplanting, 8 days	6 00
Plowing, boy and horse, 1 day	1.25
Harvesting 14 days, and 4 days with team,	14.50
5 lbs. seed, at 2s. per lb	1.25
	$38.37
Value of the crop, 1026 bushels and 40 lbs., at 7 cts, per bushel,	$71.87

The average yield, per acre, of the above crop, is 955 bushels. GEORGE SHEFFER.

RUTA BAGAS.—*Mr. M'Connell's Statement..—1 acre.*

The soil on which my ruta bagas were grown, was part sand and part clay. Two years before, had a crop of wheat, which was overrun with tares and pigeon weed. The following year, I took from it a crop of potatoes. After the potatoes came off, I plowed the land; also twice in the spring, followed by sufficient dragging and rolling. I then applied 24 wagon loads of good manure from the barn-yard. They were sown 19th and 20th of May.

2 lbs. seed,	$1.25
Drawing dung and drilling, 4 days,	8.00
Three days plowing,	6,00
Hoeing, 8 days,	6.00
Taking up and dressing,	3.00
	$24.25
Product, 855½ bushels, at 8 cents,	$68.44
Expenses,	24.25
	$47.19

Canandaigua, Dec. 11, 1842. JOHN M'CONNELL.

CARROTS.—*Mr. Risley's Statement.*

The condition of the land previous to the present season, was as follows:—The crop of 1841, was carrots, a part for the roots, and a part for raising seed; the land had no manure put on it for the last ten years, but had been used for a meadow for the most part of the time. In the spring of 1842, there was a light covering of manure, say ten loads to the acre; land plowed twice, harrowed, and raked, and two pounds of seed sown in rows, sixteen inches apart. Sown the 1st of May, and harvested between the 25th of October, and the 1st of November, and the expense of cultivation was $31.00. The product on one acre, was 985½ bushels.

WM. RISLEY.

Fredonia, Chaut. co., Dec. 17, 1842.

THE SILK BUSINESS AT AUBURN.

THOSE who believe with us, that the only obstacles to the success of the culture and manufacture of silk in this country, are such as can be easily removed by perseverance and the capital necessary for its manufacture, will rejoice at the success which has attended the effort which has been made to introduce this business into the Auburn prison, by the enlightened and well directed efforts of Mr. Polhemus, the Agent of that institution. It will be seen from the following Report, recently made to the legislature, that notwithstanding all the obstacles attendant on the introduction of a new business, it has been made sufficiently profitable to pay as large an amount for the labor of the prisoners, as any other branch of industry affords:

Report of the Agent of the State Prison at Auburn.

The effort to introduce the manufacture of silk was commenced by the agent on the 20th of May, 1841, at the suggestion of the Governor. A single throwing mill was purchased, and a small quantity of cocoons was purchased in the vicinity of Auburn. Two convicts were assigned to the business, one of whom was employed in turning the wheel, and the other in preparing and serving the cocoons. After six months, four other throwing mills, built in the prison, were set in operation in the same manner, with an addition of eight convicts. In April last, water power was provided, and soon afterwards, five other throwing mills were put in operation, one of which was purchased, and the others built here. Two machines were subsequently added, and in August last, a steam engine was substituted on the failure of the water power. The effort had attracted some attention abroad, and a full and regular supply of cocoons was received, at prices varying from three to four dollars per bushel.

The machinery and apparatus now consists of the steam engine, 12 throwing mills furnished with 64 spindles, 12 bobbing wheels, 12 stationary wire swifts, 6 pair of upright swifts, 8 pair of horizontal swifts, 1 drying rack, 2 quilling mills and appartus, 1 set of reeling pins, 10 seventy-two inch reels, 12 forty-four inch reels, 1 band maker, a dye house with kettles, implements and fixtures, and other utensils and implements. The value of the machinery, utensils, and implements, is $2,115, which may be assumed as the cost, and of course, includes the labor of the convicts in constructing the same. The force employed in the manufacture of silk, has been increased from two to forty convicts, and the aggregate labor of the whole since the commencement, is 8,662 days.

The table hereto annexed, exhibits the result of the operation. The aggregate value of the avails of silk manufactured, in sewing silks, twist and fabric, together with the materials and products on hand at low rate market prices, is $12,763.26

The whole expense of the manufacture, exclusive of the labor employed, is 9,766.51*

Leaving the sum of $2,996.75 for the avails of the labor and interest on the capital; equal to 34 cents and 6 mills per day, for the labor of each convict. A reference to the agent's annual report, will show that this average is equal to that of the products of the labor of convicts under the contracts in mechanical departments.

The sewing silk produced is superior to the imported article, in strength and softness of texture, in smoothness and in color, and is preferred wherever both have been fairly compared.

The operation was begun merely as an experiment; neither the agent nor the operatives had any practical acquaintance with the manufacture.

The chief part of the machinery has been not only constructed, but invented here; consequently, there have been hindrances, delays, expenses, and losses, which could not occur in a business conducted with the advantages of skill and experience.

The cost of the material has been far greater than it would have been, had there been any general attention to silk culture in the country. The products encountered prejudices in the market, and the market value of such products has been depreciating, while the cost of the material has not diminished. When these facts are considered in connection with the machinery provided, together with the material and products on hand, and the condition of the business, and the fiscal condition of the prison, the agent has no hesitation in declaring that the business may be conveniently enlarged during the present year, so as to increase the force employed to an hundred men, with an increase of profits exceeding fifty per cent; and that it may be so extended as ultimately to employ all the convict labor which can be assigned to it, consistently with a proper conduct and management of the prison.

The agent therefore feels himself authorized to congratulate the Inspectors on the successful introduction of a new, most interesting, and most useful department of industry; which can be rendered at least as profitable as other modes of employing the convicts, while it is exempt from objections on every side. The financial advantages thus secured, could scarcely be exaggerated, since the results fortunately appear at a time when more than an hundred of the convicts are left unemployed by the operation of the law of 1842, designed to protect the mechanical labor of our fellow citizens against competition in the penitentiaries. But these advantages are inconsiderable, compared with the general and lasting benefits which must result from the successful establishment of the silk culture and manufacture in the United ted States, a department of industry that has enriched and aggrandized every country by which it has been adopted.

The manufactory here, will give the necessary impulse to the silk culture, while it will present a model and furnish instruction to our fellow citizens who may desire to engage in the manufacture; and by its successful results, encourage the employment of capital in the production of fabrics, which, though more generally used by the opulent, are still regarded as among the most indispensable articles consumed in every civilized country.

HENRY POLHEMUS, *Agent.*

State Prison, Auburn, Feb. 1, 1843.

"In the obscurity of the cottage, far from the seductions of rank and affluence, is nursed the virtue which counteracts the decay of human institutions; the courage which defends the national independence; the industry which maintains all the classes of the state."

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* Of this sum $8,416 went into the hands of farmers, for cocoons and reeled silk.—*Eds.*

MEADOWS.

In the United States, where it is necessary to feed animals from three to six months, and where hay is the principal article for their subsistence, the meadows from which this hay must be derived, are of no little consequence to the farmer, and their formation and management, items of no little importance in the system of agriculture. It was formerly the custom to prepare a part of the farm for meadow, generally the most level and rich part, and this was used constantly for this purpose, always receiving a liberal portion of the manure of the farm, and never being plowed or cropped. The natural consequence would be, that the more valuable grasses would be displaced by the coarser ones, or by weeds, and the actual value of the product for food seriously impaired, even when not materially lessened in quantity. Occasionally, a farmer in advance of the age, would renew the better grasses on his meadows by manuring and re-seeding, followed by a thorough harrowing of the surface; but in general, the result was a gradual running out, with scarce an effort on the part of the farmer to prevent it.

A better method has followed the introduction of a rotation of crops, by which every part of a farm is in turn subjected to the plow, or is alternately cropped, and in meadow or pasture. In this method, there is no time allowed for the decline of the valuable grasses, and by their constant renewal, the introduction of the inferior grasses or useless plants is prevented. But it is evident that in this system, there must be a preparation of the soil previous to its being laid down to meadow. It must in the first place be made fit to be acted upon by the plow; it must be freed from surface stones, whether fast or otherwise; it must be drained to a depth sufficient to furnish a dry warm subsoil to the roots of cultivated plants; and if it has been exhausted, as nearly all long cultivated soils have been under the former vicious systems, it must receive a sufficient supply of manure, to render it fit for the production of crops. When thus fitted, and once well seeded, the basis of permanent improvement has been provided; as long experience has demonstrated that a proper course of crops with the grasses, instead of impoverishing the soil, tends constantly to add to its fertility. In this method, the plow does not constantly follow the plow on the arable lands, nor are the meadows, annually, and for long periods, submitted to the scythe; but the plow, meadow, and pasture, succeed each other at such intervals as experience shall deem most suitable for each.

In all parts of our country, there are more or less extensive tracts known as swamps, peat meadows, bog holes, &c. useless in themselves, and deforming the farms on which they exist. For unknown centuries these spots have been the reservoirs of animal and vegetable matter, and contain a large portion of the fertile materials that once existed in the soils around them. That such places would be productive in the highest degree, if it were possible to cultivate them, or that the valuable deposits they contain would be the means of giving fertility to large tracts of unproductive soil, if properly distributed, is too evident to admit of a doubt; yet these natural deposits of wealth have been almost wholly overlooked, and covered with flags, rushes, bogs, or water, they still remain to poison the air with their exhalations, or keep from the farmer the most fertilizing portions of the soil. That these places may be made the most valuable parts of a farm by the exertion of a little energy, and the expenditure of a reasonable degree of labor, there are, fortunately, owing to the progressive spirit of the age, abundant examples to prove.

Whatever may be the condition of these natural meadows, in other respects, the first thing to be done, is to thoroughly drain them. The best method of doing this must depend on circumstances. If a considerable quantity of water is to be carried off, open drains, of a size and depth equal to the ready removal of the water, must be made. In many cases too, the texture of the deposit is so loose, that no other drains can be of use; and even these, until the soil has acquired some solidity from settling together, will be liable to occasional obstruction, and will require to be cleared or deepened, as the banks fall in, or the loose soil obstructs them. Where the quantity of water to be removed is small, or the texture of the soil admits it, covered drains are always to be preferred, as furnishing less obstruction to agricultural operations, and occasioning no loss of surface by their presence. All that is necessary, is to allow the water to flow off quickly and freely, and to the necessary depth; without this is done, the labor expended in draining will be mostly lost.

When the ground is drained, the next step is to cover it with the cultivated grasses, or with other crops. If the soil is mostly vegetable matter, or peat, it is not fit for cropping unless a covering of common earth is applied. If considerable quantities of the earths exist in the deposit, it may be cropped with advantage as soon as drained. The surface of such places should be leveled; all bushes, bogs, &c. cut out, and then the surface covered with a coat of earth, such as sand or gravel, to the depth of three inches. With this, a quantity of manure should be incorporated, and then spring grain of some kind, with a liberal supply of grass seeds of the kinds desired, may be sown. Some prefer having the first crop roots, potatoes for instance, and where the soil contains sufficient earth to render the gravel covering unnecessary, this is probably the best course. Spring grains, and grass seeds, follow the roots. Winter is by far the best time to transport gravel upon such swamps; as a little calculation will show the number of loads required for a given area, and it may be spread at any time. It is not often that such grounds will admit at first the driving of teams upon them, until fully settled or graveled; the winter therefore, when the surface is frozen, is the best time for covering them. It is not denied that much labor and some expense must be incurred in reclaiming swamps, but when once done, their fertility appears inexhaustible, and it not unfrequently happens that the crop of a single year will repay the whole. There are many thousand acres of land in New England, which until within a few years had been deemed worthless, from which at the present time heavy crops of roots, grain, and grass, are now taken; and the amount thus reclaimed is rapidly increasing.

Farmers suffer a great loss from too close feeding of meadows or pastures, in the fall or spring of the year. Clover is almost destroyed in this way quite frequently, the crown of the plant being cropped by the half starved animals, until the power of vegetating is lost. This is a miserable treatment of meadows, and no good farmer who manages affairs as he should, will be habitually guilty of doing it. There are cases in which, where the soil would admit of rotation, it is inconvenient to plow up meadows, and it is necessary to keep them in grass. In these cases it is usually advisable to manure them with compost, and if this is well harrowed in with a supply of fresh seeds, meadows may be kept in good condition for any number of years. But unless extraordinary circumstances forbid, a course of cropping is altogether preferable to a long continuance in grass. The great difficulty in the rotative course of meadows, is found in the fact that farmers do but about half seed their lands, making the grasses coarse, and preventing the formation of close fine turf or bottom, so essential to good pasture or hay. Grass seeds, like the manures of too many farms, are frequently spread over so much surface, that the plants are hardly near enough for neighbors, while ample room is left for weeds to spring up and check, if they do not actually smother the young grass. It is idle to expect to convert poor exhausted land into meadow, until it has been supplied with manure. Grasses make land rich rapidly, and thus in a rotation prevent exhaustion; but there must be something furnished for the grass plants at first, or growth is impossible. When the farmer remembers that six sheep will eat a ton of hay in a winter, and that each cow, ox, or horse, requires from one and a half to two tons in the same time, and that it is to the meadow he must look for his supply, the importance of paying attention to this part of the farm will be obvious.

CULTURE OF HOPS.

"MESSRS. EDITORS—Will you do me the favor to give me the process of planting, cultivating, and preparing hops for market? W. W. LELAND."

Pontotoc, Mi., 1843.

A deep rich loam, rather heavy than light, with a porous subsoil, is the best soil for the hop. Air should have free access to the plantation, but if protected by woods on the north and north-west, the effect will be good. The neighborhood of swamps should be avoided, as they are apt to produce mildew. The soil must be fitted by deep and fine plowing, and repeated harrowing, so as to destroy all weeds, and make the soil as mellow and fine as possible. They must be planted in rows, six or eight feet apart, each way; at 8 feet, there will be 680 hills to the acre; at 6 feet, 1,210. Hops are planted in the spring, and by cuttings and sets from older plantations; each set should have two joints, or eyes; and are generally, some six inches in length. The ground is marked out into squares, at the proper distance; and where the furrows cross, a shovel full or two of compost manure is put in; on this, a quantity of earth is drawn to make a hill; and in this, five or six sets, at intervals of six inches, are placed. The hops produce nothing the first year, and a crop of potatoes, roots, or corn, is usually taken off. It should be a hoed crop, to keep the ground clean.

The hops require hoeing and hilling annually; and a dressing of manure is applied every three years. The vines, the first year, are not allowed to spread; but are twisted into a bundle on the hill, so as not to interfere with the other crop. The second year, in the spring, the hills are opened, the old vines cut away, the earth loosened, suckers cut away around the edges of the hills, and nothing allowed to remain that will injure the principal roots, or interfere with their throwing out strong shoots. The poles may be set in April; they should be some 12 feet in length, and stout enough to resist the wind. About 3 poles will be best for each hill, placed so as to give a full exposure to the south. They must be set firmly, with an iron bar, and the earth rammed closely around them. The vines, after they have grown to a proper length, must be secured to the poles by dried rushes, or strips of bass, two strong shoots to each pole, and all the rest must be cut away.

The value of the hop, depending on the quantity of *lupulin*, or yellow powder, it contains, should never be picked as it sometimes is, until that part is fully developed, or in other words, not until it is ripe. This is known by the yellowish hue of the hop, or by examining it, and it should then be gathered, with as little delay as possible. The hop should be gathered in dry weather, and when it is free from dew. For gathering, a frame is used, upon which a cloth is hung by tenter hooks, and around which the pickers, generally women, stand, while the hops are cut off at the root, and brought carefully to them by men. When full, the cloth with the hops, is removed to the drying house, where they are kiln dried, and bagged for market. The process of kiln drying should be completed as fast as the hops are gathered, to prevent their acquiring an unpleasant flavor from the moisture they contain. When dried, they are packed in bags, pressed in closely, and firmly sewed up, and are now ready for market. Every step in the process of drying, must be performed with neatness, and a regard to the saving of the peculiar principle to which the hop owes its value. The product of the hop is variable, and must be considered rather an uncertain crop. From 10 to 15 cwt. per acre, may be considered a medium crop; though, it has reached from 20 to 24 cwt. A plantation will last, well tended, from 12 to 15 years, when its renewal becomes necessary.

More full, and ample directions, for the culture of the hop, and the determining their quality, may be found in the previous volumes of the Cultivator; particularly, in the 2d, to which we must refer inquirers.

DOMESTICATION OF THE BUFFALO.

OUR correspondent "J. B.," of Van Buren, N. Y., in a note, says: "Now, I wish to inquire, whether there has been any attempt made to domesticate the Buffalo; and, if there has not, why will not our State Ag. Society make the attempt? Surely, I think it worth trying. The Moose too, may be worth domesticating; and, while we are sending to England for Short Horns, Berkshires, and South Downs, would it not be well to try to use such as nature has put in our possession? I make this suggestion to you, in the hope that you will call the attention of your readers to this, as I consider it, important subject."

The herd of Buffalo, or Bison, to which our correspondent alludes, as exhibited at the State Fair, were intended for England; rather as objects of curiosity than utility. According to Catesby, Pennant and Richardson, attempts have been made to domesticate them, but without much success. Pennant says, that "calves have been caught, and brought up with common cattle, but though they seemed for a time, to have lost their savage nature, and would breed with the common cattle, they were always impatient of restraint, unruly, and leading the tame animals into mischief." It appears scarcely possible, that any good qualities could be gained by our domestic cattle, from crossing with the Bison, unless their wool, or fur, could be retained, which is not probable. We do not know whether any attempts have been made to domesticate the Moose, but the thing is doubtless possible. It should be remembered, however, that little can be gained by domesticating animals that do not add to our existing stock of food and clothing. Whether the Bison or the Moose belong to this class, our readers must determine.

BONE MANURE.

"MESSRS. EDITORS—I would be very much obliged, if you, or some of your correspondents would inform me of the best method of applying bone manure, and the quantity to be used per acre. I have used a considerable quantity of it, and should be pleased to give in return, the result of my experiments. R. T. B."

Sandy Spring, Md., 1843.

Bone manure, may be applied broad cast, as gypsum is sown: or, placed in drills with the seeds, and this is, doubtless, the best way of using it. In this way, its influence is felt at once in the germination and quick growth of the plants, a thing of much consequence with the turnep, and other plants, liable to be destroyed when young, by insects. In England, it is always, or generally, sown in drills with turneps; and in quantities varying from ten to thirty bushels of dust per acre. It has been recommended to ferment the bone dust before sowing; and Mr. Colman, in his Report, says: "the most successful application of bone manure which I have known was where they were mixed at the rate of about one part to eight, with leached ashes, or mold, and a fermentation brought on, before they were applied. They were then spread lightly in the furrow, where carrots were sown. The effects were most favorable, and surpassed a free dressing of barn manure, to the same kind of crop." Mr. C. does not name the quantity used per acre.

We shall be happy to receive an account of Mr B.'s experiments.

DANA'S MUCK MANUAL—SWAMP MUCK.

OUR correspondent, "K. G." of Voluntown, Ct., who inquires respecting the subjects here named, is informed, that Dr. Dana's Manual, is to be found at any of the principal bookstores in our cities, and that the price of the last and best edition is 62½ cents. As to our opinion respecting the work, we repeat what we have before said; that it is the best treatise on manure yet published. "K. G." says he has abundance of swamp muck on his farm. If he has, he has the means of rendering what is now 'poor and unproductive,' rich and fertile. His deposits of swamp muck are a mine of wealth; and let him carry out the practice recommended in the Manual, by mixing muck and manure, in the proportion of one-third of the latter to two-thirds of the former; or, by composting and fermenting in any other way, and he will find the utility of the method at once. Pond mud, formed by running streams, is different from swamp muck; as it does not require fermentation, or composting, but may be applied at once to the soil. Perhaps one of the best methods of using muck, is to cover the yards in the fall of the year with it, to the depth of a foot.

This will absorb the urine of the animals, and subjected to the trampling of their feet, will, in the spring be fit for use, and a most valuable manure.

FROST AS A PULVERIZER.

Every farmer is aware that fineness of the soil, is an indispensable condition to great productiveness. In a fine soil, the minute pores and rootlets are brought in immediate contact with the earth at many points, and are thus enabled to receive much greater supplies of nutriment than they could obtain in a coarser soil. Soils, the particles of which are fine, are also better conductors of heat or of moisture than others, and hence more fit for the general purposes of culture. Where sand predominates in soils, friability and consequent fineness prevail; but there are those in which clay exists to such an extent as to render them, especially if worked when wet, so hard and compact as to render them wholly unsuitable for crops. Such soils, though productive when worked in a proper state, are in a condition for working a much less space of time, during the year, than drier ones; consequently the best method of working such, or rather extending the time of working them, becomes an object of much moment to the farmer located on compact or clay soils.

Undoubtedly the most effectual remedy for soils apt to consolidate by working, is draining; the evil in nearly every case being fairly traceable to an excess of moisture. This is retained by the superabundant clay, and working converts this to a mortar, which, whether wet or dry, is utterly unfit for the production of crops. Draining reduces this excess of water, and leaves only such as belongs to the attractive power of the soil. In this state, mortar cannot be formed, and the soil must remain at all times friable. But many of our farmers find themselves unable to encounter the expenses of draining, at least to any considerable extent, and hence the necessity of adopting the best remaining way of cultivating soils, apt to form in masses by working.

Next to draining, the most efficient agent in the management of such soils, is frost. This is a most effectual pulverizer, and the farmer may compel it to perform a vast deal of useful labor for him. It is particularly useful where spring crops are to be grown, aiding the pulverizing action of the plow and harrow to an incalculable extent. To avail ourselves of the action of frost as a pulverizer, it is necessary that lands should be plowed in the fall, the later the better, as in the latter case the soil feels the influence of the rains less, and that of frosts more, than when plowed early. If, for the crops intended to be cultivated, manures are to be used, these should be placed on the ground before plowing, and then the surface turned neatly and cleanly over. This course is advisable, where long or fresh manures are to be used, although the deep plowing we would recommend where frost is to act, is entirely unfavorable to the immediate action of the manures on the young plants. On the contrary, where rotted manures, or compost, is to be used, it may be applied to the surface in the spring, and harrowed in with the seeds. The manner in which frost acts to render soils fine, is easily understood; it is owing simply to the expansion of the water when freezing. In soils which have an excess of water, it fills all the interstices, to the exclusion of air; whereas in soils that are permeable, or have only a proper supply of moisture, air exists in every part. No matter how closely soils may be compacted by the plow, or how wet they may be at the time of working; if the water they contain freezes, the particles of earth are all separated, and the frost leaves the mass loose and friable. Land plowed in the fall or winter, intended to receive the benefit of the action of frost, should be worked as little in the spring as is possible, consistent with the good getting in of the crop; unless in the very driest condition, all trampling or working such soils in the spring, is undoing all that the frost has done, and rendering them dense and impervious for the season. It is obvious, that soils to receive the full benefit of frost in fitting them for spring crops, should be as free from weeds, such as Canada thistle, &c. as possible, as otherwise they will get and retain the start of the sown crop. On soils infested with weeds, a second or spring plowing may be necessary, and unless as before remarked, the surface is very dry a compactness will be given, from which the soil will not recover until after the action of the frosts of another winter, and which will be fatal to the cultivated crop. Unless, therefore, the necessity is an urgent one, second plowings should not follow on lands submitted to the action of frost, and where the necessity exists, only when the soils are in the driest possible condition.

MR. COLMAN'S EUROPEAN AG. TOUR.

We are glad to see that Mr. Colman's proposed Tour and Survey of European Agriculture, is every where hailed with great pleasure. We find the following notice of it in the Delaware Republican:—"For the information and benefit of our many farmer friends and subscribers, we give in another column to-day, Mr. Colman's prospectus of his proposed European Tour and Survey; already there are many subscribers to this valuable work in this county, and the merits of the undertaking and the talents and qualifications of the author, are alone necessary to be made known to the agriculturists of Delaware, to ensure several hundred subscribers to this work. He will be in fact, the first farmer ambassador and minister plenipotentiary to any European court, sent immediately from the ranks of the people, and we predict the happiest results from his mission. In the first place, we shall have a most graphic portrait and history of foreign agriculture—their live stock, improvements, and rural buildings, and implements—then, we prophecy a correspondent good feeling reciprocated by his labors upon the agricultural products of the United States, and mark the prediction, before his tour is completed, the corn meal, the beef, the pork, the lard, the butter and cheese of this country, will be shipped to the English markets in place of the specie of our banks."

"THE SCHOOL AND THE SCHOOL MASTER."

Education for the people, the instruction and elevation of the masses, the diffusion of useful knowledge in every direction, is justly receiving a large share of attention at the present time, and we are happy to say, nowhere are these important objects more closely and liberally pursued, than in our own state of New-York. Democratic institutions, or institutions based on the will of the people; and all ours, both civil and religious, are of this class, can only be perpetuated, or safely managed, except when those who wield the power are intelligent and virtuous. This important truth, which lies at the base of our social superstructure, has not been without its influence on those who have in years past had the management of our educational policy, and is claiming a large share of the labors and attention of our wisest statesmen and far seeing patriots of the present time.

We have no intention here of entering into a discussion of what is to be understood by the term education, or what amount of knowledge is necessary to make an educated man; it is enough to know that a man may be very learned, and yet be far from being an educated man; and that a man may be thoroughly educated for all purposes of utility, and yet have very little acquaintance with what is by many considered the essential part of learning. That man is an educated man, whose mind has been so trained, that whatever may be the subject presented, he is ready to seize it as it offers itself, overcome the difficulties that present themselves, and mold it into circumstances of practical utility. Mere learning never does this; the training, the education, the accustoming one's self to think, reason, and act, is wanting. While, therefore, we look with no disfavor on the higher branches of learning, we do not consider them as necessarily, or even remotely, included in the term education; particularly, the kind required by the great mass; the thinkers and actors of the American people. Learned men we are not anxious to have our farmers become; educated men they must be, or fail to realize the high destiny which should be the aim of every American citizen.

The measures taken by this state in favor of the education of the people, have certainly been of an enlightened and liberal class, and if all has not been effected that the friends of education could wish, the progress on the whole has been very satisfactory. The organization of the common schools, and their endowment with the academies of the state, by the formation of the literature fund; the addition of the money derived from the United States distribution fund; the important movement of furnishing libraries to each school district; and the appointment of deputy superintendents, whose time is to be occupied in arranging, overseeing, and rendering more harmonious and effective the diversified system of teaching, hitherto acted upon in the several counties; all show that the state has kept its watchful care on this great interest, and devoted its means to the service of education, in no stinted or limited measure.

Individual effort, too, has not been wanting to carry forward more effectively, the cause of general education; one of the most honorable and useful, as we believe, of which has resulted in the preparation, publication, and distribution of the volume named at the head of this article. Many of our readers will remember, that a number of years since James Wadsworth, Esq., of Geneseo in this state, offered a premium for the best work on education. Circumstances prevented the offer taking effect in the manner proposed, yet it is probable to that offer we owe our system of School District Libraries; and to it we are now indebted for the publication named above, and intended for all those concerned in the management of, or interested in the progress of schools. The volume is a joint production from two distinguished teachers and scholars, men thoroughly acquainted with the matters of which they treat. The first part entitled "The School," is from the pen of Prof. Potter, of Union College; the second part "The Schoolmaster," is from the pen of G. B. Emerson, A. M., well known for his ably directed efforts in the cause of popular education.

By the liberality of Mr. Wadsworth, a copy is to be placed in each school district in the state; and also in the hands of the Governors of the several states, and the superintendents of common schools in the several counties of the state. The expense to Mr. Wadsworth will exceed $8,000. Issued as the volume is, with the approbation of the State Superintendent of schools, and valuable as it is for its suggestions, its general circulation can scarcely fail to give a decided impulse to school instruction. To every such effort we bid God speed. Let the state, let individuals continue their labors to educate and elevate the masses. The expense of giving education to all, will be less than will be required to counteract and punish the vices consequent on ignorance, and it is in this form that the question of education presents itself to the reflecting mind.

About 25,000 persons have taken the benefit of the bankrupt law.

Obituary.—We regret to learn from the Western State Journal of Syracuse, that that firm friend and enlightened advocate of agriculture, Silas Gaylord of Skaneateles, is no more. His death took place very suddenly, on the 30th of January, after an illness of only a few hours. He was at the village of Skaneateles on business, in the morning, and returned home slightly unwell. At 2 o'clock a physician was sent for, and at half past five he was a corpse.

The sudden demise of Mr. Gaylord will be severely felt by the friends of an improved agriculture, and associated efforts for its promotion, in the county of Onondaga. For several years previous to the organization of the present county society, through the efforts of Mr. Gaylord and a few other congenial spirits in Skaneateles, a town society had been in operation, the meetings of which were well attended, and evidently produced an excellent effect in exciting inquiry and extending information among the farmers of that fertile and most beautiful section of the county and state. Few if any individuals in the county, have done as much as Mr. Gaylord to call the attention to improved breeds of animals, or made more liberal expenditures in introducing them for the benefit of the public.

Mr. Gaylord was a member of the society of Friends; and his beautiful situation on the western margin of the Skaneateles lake was marked by that neatness, good order, and thrift, so characteristic of that most valuable class of our citizens. His farming processes were well conducted; his barns, implements, and modes of feeding, all of the most approved kinds; and every part of his farm bore the marks of industry, directed by intelligence. A warm hearted friend, a kind neighbor, and a good citizen, as such he will be missed and lamented; but the farmers of the county will most regret his absence from their social gatherings, his sound advice, and the active intelligence he brought to the agricultural societies of which he was an efficient member. Peace to his memory.

The other Picture.—Our correspondent, "J. M. E." of N. Carolina, who from being a merchant in the city, to gratify his taste for rural pursuits, turned farmer, gives us rather a doleful account of his first year's experience. We can only give the substance of his statement. He says:—"I bought a Durham cow at a high price, which soon died. I had a 'fine mare,' and she ran away. I planted in the spring, 28 bushels of Irish potatoes, and dug only 150—from 10 bushels of sweet potatoes planted, dug only 50. I sowed 5 bushels grass seed, and never got a seed back again, nor hardly saw a stalk. I sowed some spring rye, and had it not been for a row of cherry trees, should never have known where it was. I bought a fine horse for $115, and sold him this winter for $50. I put up four razor-backed pigs, fed them four months, and then they weighed about a pound less than when first put into the pen. I bought 40 ducks and only one of them ever laid an egg, not even on a 'Sunday.' The hawks caught all my chickens; the hogs eat all my goslins, and we finished the last gobler on New Year's day. Out of 35 hogs I lost 17, and also two of my four cows." Here is a catalogue of mishaps long enough to dampen the ardor of even the most determined; but they do not thus affect our friend. He says:—"But 'none of these thing move me' to despair. I have now, 1843, commenced a new year in as good humor as ever before, marked 'this side up with care,' and with a resolution of total abstinence from the use and traffic of all negroes and liquor." With the energy which this spirit indicates, we doubt not J. M. E. will be able to give a better account of his second year's operations.

Fattening Cattle on Linseed Oil.—Col. John Prince of Jamaica, Mass., states in the N. E. Farmer, that having read in Monk's Ag. Dictionary, that five galls. of linseed oil (raw,) will fat a beast sooner than £5 sterling in any other way, he determined to try the experiment on a large sized cow. He says:—"I dried her up at pasture, and early in autumn determined she should be fatted on *oil*. I ordered one pint to be well mixed in half a bushel wheat bran, to be for one day's food, with such hay as she would eat. She refused absolutely to eat of it, until the *third day*, after which she came to and became fond of it, and in one week we could perceive she was gaining finely. After using five gallons, I purchased two more. I then, for a fortnight, gave Indian meal in lieu of the oil. I then offered her for sale to the butchers in my vicinity: they all examined and declared her uncommonly well fatted, but as she had been fatted on *oil*, they were afraid the meat would not be good. Finally, one young man gave me $9 per 100 lbs; (she weighed 798 lbs.) I never saw finer looking meat, and the purchaser several times afterwards, told me his customers often spoke of the superiority of that beef, not knowing it had been oil fed. One or two years after that, I fatted a yoke of oxen. One I fed on oil, the other on meal and vegetables. They were very fat, and I fully thought the oil fed one did not cost half as much to fatten, as the one on meal and vegetables. I have not fatted any beef animal since, or I should have adopted the oil plan."

"**Handling.**"—Good judges say they can tell the quality of an animal as well by feeling as seeing. Col. Jacques, of Charlestown, at a recent agricultural meeting in Boston, said:—"The *handling* of the animal is of very great importance: a soft, silky, elastic skin is desirable. Take an ox with a hard, wiry touch, and raw boned, and there is no use in trying to *beef him;* you might as well stick down two stakes, throw a buffalo hide over them, and put your roots and grain down before that."

GEOLOGICAL SURVEY OF NEW-YORK.—Part III.

[Conclusion of Notice of Prof. Vanuxem's Report.]

The readers of the Cultivator may remember, that in September, 1841, we called attention to the fact of the discovery of Rock salt in Virginia, and from the character of the rocks in the vicinity of the deposit, as compared with those at the Onondaga Salines, suggested the probability of their being the same, and that consequently the presence of rock salt at the latter place might be fairly inferred. The geologist of Virginia, Prof. W. B. Rogers, however, informs Prof. Vanuxem, that the Virginia deposit belongs to an age different from either the New-York or the Cheshire (England,) deposits, being above the former, and below the coal, consequently, in what is termed in the N. Y. System of rocks, the Old Red Sandstone, or Catskill group. This is an interesting fact, as adding another to the group of rocks in which fossil salt has been found. We may remark, however, that whatever may be the age or position of the salt deposits, the general character of the rocks enclosing them are every where much the same, and agreeing so exactly with those at Onondaga, as to afford little or no room for doubt, that the N. Y. Salines have their source in beds of fossil salt. The dip of the rocks of the salt and other groups in Onondaga, one of the most important elements to be taken into account in all borings for salt, seems to have been too much overlooked in all the experiments heretofore made.

The agricultural character of the soils on the Onondaga Salt group, and in the counties of Onondaga and Cayuga they are of considerable extent, is in general of an excellent quality, particularly on their southern margin, some of the finest farms in the state being found in this group.

Water Lime Group. (*Hydraulic limerock of Eaton.*)—This group of rocks takes its name from the impure drab colored limestone from which all the water lime in the district south of the Erie canal, with a single exception, is prepared. The rock is well defined both in this state and Pennsylvania, by its mineral character, and by its fossils. The thickness of the group is from 30 feet to 100. Of this thickness, but a small part is occupied by the water lime proper, the rest being a dark blue limestone. It is easily traced across the state from east to west, by its peculiar qualities, and peculiar fossils. Its influence on the agricultural character of the district is not great, as the thickness or spread of its outcrop is limited.

Pentamerus Limestone.—This rock takes its name from the Pentamerus galeatus, a shell well figured in the Report, and which in the 3d district, is confined exclusively to this rock. There are some others which may also be considered as characteristic of this mass. This rock enters the district from the first with a considerable thickness, but gradually thins out, and has not been traced to the west of Oneida creek. Its thickness in Otsego co. is about 80 feet.

Catskill Shaly Limestone. (*Delthyris or Scutella limestone of the Reports.*)—In the first district this mass is a thick rock, and is named from the Catskill creek, where it is well developed. In the third district the mass is not so thick, the shale diminishes in amount, and disappears in Herkimer county; but the limestone part continues into Madison co., west of which it has no existence. This rock is remarkably prolific in fossils, species, genera, individuals, &c. many of which are characteristic of it. A large number of these are well figured in the Report.

Oriskany Sandstone.—This rock forms a part of the Helderberg division, and can be distinctly traced from this mountain into and across the 3d district. In the first district its associates are different from those at the west; there it resting on the Catskill shaly limestone, and being covered by the canda-galla grit, while at the west it rests on the water lime group, and is covered by the Onondaga limestone. Some of the most striking fossils in the whole series are found in this rock, some eight or ten of which are figured in the Report. The fossils in this rock are usually of a large size, and frequently crowded in the lower part of the rock. This mass is well characterized, and as the quartz materials of which it is composed are of an indestructible kind, it exercises considerable influence on the agricultural character of the soils near its outcrop. This rock, in Pennsylvania, has a maximum thickness of 700 feet, while in this state, it ranges from a few inches to about thirty feet.

Canda-Galla Grit.—This is a peculiar rock, receiving its name from the fossil appearances resembling cock tail feathers, abounding in it. It is found in a thick mass at the east part of the district, but thins out and disappears towards the east line of Oneida. The origin of these impressions does not appear to have been satisfactorily ascertained. Some have supposed them to be inorganic, or a kind of crystalization; but we have no doubt they are organic, and belong to those fucoidal remains of which so many, under other forms, are found in rocks higher in the series.

Schoharie Grit.—This rock is a fine grained sandstone, and only exists in the eastern part of the 3d district; while it is found in its place in Indiana, readily detected by its characteristic fossils.

Onondaga Limestone. (*Sparry limerock of Eaton.*)—This rock, though not of great thickness, is a well characterized and important one, extending from the Helderbergs to Lake Erie. It abounds in smooth encrinal stems, some of them an inch in diameter, and giving a beautiful appearance to the rock when polished. This rock has several fossils characteristic of it, among which the *Pentamerus oblongata*, is one of the most common. The greatest exposition of this mass is at Split Rock, S. W. of Syracuse, where it is uncovered and quarried for nearly a mile in extent. It is one of the best building stones in the state, a large portion of the new structures on the enlarged Erie canal, being made of it. Blocks of it, of almost any desirable size, can be obtained.

Carniferous Limestone.—This rock, including the Seneca limestone of the Reports, is the upper member of the Helderberg division, and retains the name given it by Prof. Eaton. There are many fossils peculiar to this rock, but the most characteristic is the *Odontocephalus selenurus*, figured in the Report as No. 1. The next most marked is the Cyrtoceras trivolvis of Mr. Conrad. It is seen in its greatest thickness of about 80 feet, near Cherry Valley, and in the eastern counties is extensively quarried. It is well exposed on Onondaga West Hill; at Marcellus, and at Auburn. In Onondaga, no quarries are opened in it, the other limestones being preferred. Fish bones, (Ichthy odoralites,) have been found in it, one of which is in the cabinet of David Thomas of Scipio. The Seneca limestones are quarried a few rods to the S. E. of Marcellus village, furnishing an excellent dark colored building stone.

Marcellus Shales. *Pyritiferous or 3d Greywacke of Eaton.*—These shales extend east and west through the district, commencing near the Hudson, and ending on Lake Erie. The lower parts of these shales are very dark, or nearly black, and in several places have been bored for coal. In the lower part of the mass fossils are not abundant, but become numerous higher in the rock. In its mineral character it much resembles the Utica slate, but the fossils are very different. Of the fossils peculiar to this rock, we have figures of the *Expanded*, and the *Marcellus goniatite.* Coal, in small quantities, is found in many places in the lower part of these shales. Their structure is well exhibited near Marcellus, where their greatest thickness is observed. They very essentially modify the character of the soils produced, although the vast masses of transported material cast upon them from the north prevent their full effect.

Hamilton Group. (*Moscow shales, Ludlowville shales, &c. of the Reports.*)—The Hamilton group includes all the masses between the upper shales of Mareellus, and the Tully limestone. It is of great thickness, probably never less than 300 feet, and swelling to 700 feet. It abounds in fossils, and is admirably characterized by them; many species, and even genera, commencing with this group and ending with it. Its shells, corals, orthoceras, trilobites, fucoids, are innumerable. This group is well developed, covering no inconsiderable part of Otsego, Madison, Onondaga, Cayuga, Herkimer, Oneida, Cortland, Chenango, and Tompkins, the least part, however, in the five last counties. A large portion of the beautiful vallies, and the beds of the lakes, that form so remarkable a feature of the 3d and 4th districts of New-York, are formed in this rock, and in the Marcellus shales below. The depth of water in the lakes is from 100 feet to 500 feet, and the height of the ranges between them from 300 feet to 800 feet. The distance between these nearly parallel vallies, varies from 3 miles to 10 miles. In the Hamilton group, near South Onondaga, are extensive masses of *Cyathophyllum*, and the spreading forms of the canda-galla fossils, re-appear in multitudes in this rock. We have seen on the highlands to the east of the Otisco lake considerable spaces of this rock polished and grooved, thus proving that the polishing and grooving agent, whatever it was, acted over a very extensive region of country, and in the 3d district at very different elevations.

Tully Limestone.—This limestone mass is of importance, being the most southern or highest mass of limestone in the state; is an impure stone, fine grained, brown or blackish blue, breaking into irregular fragments. The thickness of the mass is from 16 to 20 feet, and extends east and west from Madison co. into Seneca co. There are some beautiful fossils peculiar to this rock, a few of which are well figured in the Report. One of these is the *Cuboidal atrypa*, and the other the *Tully orthis.* It receives its name from the village of Tully, in Onondaga co., where it is quarried to a considerable extent for lime, &c. It makes a good, but not a white lime. The most northern point where this limestone has been observed, is on the high grounds called Ross' Hill, in Otisco, where a large surface is exposed. Its vertical joints cause it to retain no water, and the soils upon it, as on other limestone rocks of the district, where no beds of clay intervene, are warm and productive. The Tully limestone shows itself in many places along its northern outcrop, between its eastern and western extremities, exhibiting in all, its well marked mineral and fossil characters. Large masses of this limestone have been transported far to the south of their original position, particularly near the head of the Cayuga lake.

Genesee Slate. (*Upper Black Slate of the Reports.*)—This mass lies upon the Tully limestone, is argillaceous, black or dark colored, uniform in its structure, and with very few fossils. Near the Cayuga lake; it attains a thickness of 100 feet. The greatest exposition of this slate is near Ludlowville, on the Cayuga lake, but it is extensively shown in the southern towns of Onondaga, and the northern ones of Cortland. When exposed to the air it usually decomposes rapidly.

The Ithaca and Chemung Groups.—The Genesee slate which has all the appearances of a mere mud deposit, is the last of the Helderberg division, and introduces the upper part or Erie division of the N. Y. System. This is divided into the Ithaca and Chemung groups, which extend from the Genesee slate to the coal. These groups are a series of layers of sandstone and shale, usually coarse; some of these layers are of great thickness, and some of them abound in fossils, while others are nearly destitute. They are nearly destitute of lime, and we are inclined to think this fact has no little influence on the agricultural character of the soil, and the nature of its products. Certain it is, we find on the soil of these groups. trees and plants, unknown to the rock groups lower in the series, or north of these Ithaca and Chemung groups

The Catskill Group, is the Old Red Sandstone of English Geologists; its character being determined by its fossils, which are well marked, and the peculiar character of some of its rocks. This rock is found only near the south line of the state, and capping the principal existing elevations. The figured fossils of this group show that we are approaching the region of coal, some of them being fragments of those abounding in the coal, and indicative of the same era.

We find in the Report, chapters on the uplifts in the valley of the Mohawk; on the alluvial deposits of clay, sand, boulders, boulders of primary rock, of the transition class, of lake marl, tufa, soil, &c.; on the excavations, or denudations of the district, lakes, mounds, &c. &c., and on various other topics connected with the Geological structure and formations of the state. Of the general correctness of Mr. Vanuxem's positions and remarks, we are happy to add our full conviction, having had an opportunity for an examination more or less perfect, of most of the groups described by him. With this volume, and its characteristic engraved fossils before him, the geological student will find much of the obscurity that has hitherto rested on this portion of the New-York rocks, dispelled, and his way to their investigation comparatively easy.

But though happy in being able thus to award our tribute of praise to the able manner in which Dr. Beck, and Prof. Vanuxem, have performed their duties, as published in the volumes before us, we must say that as farmers, we feel that some things, of what we deem of practical importance, have been overlooked by them; things too which it is believed the agriculturists of the state generally, and certainly those who were the most efficient and active friends of the survey, understood at the time should not be neglected. We allude here, more particularly to the *analysis of the various soils of the state,* which it has been deemed desirable should be fully and satisfactorily performed, and for which service it is well known the gentlemen selected for the survey, were amply competent. On this subject, Prof. V., in the Report before us, speaking of soils, page 231, remarks: "In this part of the survey, if any thing was expected beyond the collecting of soils for analysis, there must be disappointment."******* "The letter of the survey could readily have been complied with, and the soils collected and analyzed; but judging from the attempts elsewhere made, it is not probable that any very satisfactory results would have been obtained." The closing paragraph of Dr. Beck, on soils, page 93, is as follows: "It is hardly necessary to remark, that soils are seldom characterized in so marked a manner as the above classification [that of Prof. Low, in his Practical Agriculture,] would seem to imply. They are mixed in various proportions, and in some cases it is not easy to determine to which of the classes they belong. Moreover, the nature of these soils is constantly undergoing changes, in consequence of the various modes of culture to which they are subjected. This renders it exceedingly difficult to present analyses of soils which shall be of practical utility."

We regret very much to find this matter of analysis so passed over. Men of science abroad, and practical farmers everywhere, have considered a thorough knowledge of the constituents of the soils they cultivate, of the first importance, and to be better obtained by analysis than in any other way. Is there a farmer in the vicinity of Albany, who would not be pleased and instructed in learning the difference between the rich soil of Judge Buel's farm now, and as it was when he took possession? Is there one who would not be gratified in learning the effect of the clays he applied in changing the character of his sands, and whether they are still present to modify and render effective the manures applied? And this is only one instance of thousands which might be named. It is true, culture changes the character of soils, and it is these very changes, and the manner of effecting them, which analysis points out. No man can traverse the state without being struck with the marked difference of soils within short distances, or the effect these differences have on the cultivated crops. Skilfully conducted and numerous analyses, would show the cause of these discrepancies, and point out the mode of remedying the evils.

We do not pretend to attach blame to any one; or state upon whom this duty of analysis should devolve. Its omission we much regret; and the disappointment we feel, we think will be common. And one reason of our mentioning it here, is in the hope that it is not yet too late to have a full and extensive analysis of soils from every part of the state, and strata or group of rocks, performed, and the results incorporated in the further progress of this great state work.

Emigration to Virginia.—It is stated in the papers, that the Hon. A. L. Foster, M. C., from Madison, in this state, has purchased 1000 acres of land in Virginia, at $3.50 per acre, and that Mr. Townsend of Buffalo, now Sergeant-at-arms, at Washington, has also purchased a farm in Virginia, and that both intend to settle there.

Large Yield of Cotton.—The Mecklenburg (N. C.) Jeffersonian says:—Col. John M. Potts, residing in the Steele Creek settlement of this county, raised the past season, 2,263 pounds of Cotton, from one acre and four rods of ground."

Dr. PLAYFAIR'S SECOND LECTURE.

GRAZING AND FATTENING CATTLE.

[In our last number we gave the first Lecture of Dr. Playfair, before the Royal Ag. Society of England, on the application of the principles of Physiology to the Grazing and Fattening of Cattle. We now give his second and last Lecture on the same subject, which was delivered on the 8th Dec. last. We are indebted to the London Gardener's Chronicle, for the reports of these Lectures.]

Dr. Playfair, in commencing his second lecture, stated that in the last lecture he had examined the nature of the food of animals; in this evening's lecture, the process of growth and fattening in animals, would be more particularly considered. The health of an animal depends on the supply of nutriment being equal to the waste that is going on in the body. Healthy adult animals weigh as much at the end as at the beginning of the year, and this depended on their having had enough food to supply the waste going on in the system. In young and growing animals it is somewhat different; they require more supply than there is waste, because their bodies are constantly increasing in size. When animals are first born, the functions of organic life are chiefly performed. Respiration is at this time more active than in the adult. Nutrition is also more active. The food that nature supplies animals with at this period of their life, is well adapted to assist those functions. In the milk of animals is found nitrogenised matter for developing the system, and carbonised matter for supplying animal heat. The following is an analysis of the milk of a woman, a cow, and an ass, made by Dr. Flayfair:

	Woman.	Cow.	Ass
Casein,	1·5	4·0	1·9
Butter,	4·4	4·6	1·3
Sugar,	5·7	3·8	6·3
Ashes,	0·5	0·6	—
Water,	88·0	89·0	90·5

The casein is the nitrogenised principle which affords nutriment to the muscular and other tissues. This is in greatest quantity in the cow. The butter and sugar are the combustible materials which by their combustion supply heat to the body. The ashes consist of phosphate of lime and common salt, both of which materials are necessary for the healthy function of the body. Thus, in milk we have all that is necessary for the growth of the body, and it is the type and representative of all food; for unless food contain the principles of milk, it is not fitted for the purposes of the body. Casein is the principle of cheese. In its ordinary state, as made for the food of man, cheese contains both casein and butter. The stomachs of young animals are not adapted for separating the nitrogenous principles from food, and the casein of milk is supplied to them ready separated. In the young ruminant, as the calf, the three first stomachs into which the food of the adult animals enter before it is digested, are not used at all. The milk passes at once into the fourth stomach. Hence the necessity of weaning these animals gradually, in order that their stomachs may be fully able to prepare the raw food for digestion. All food for weaning children, also, should be prepared on the model of milk, changing the relations of the nitrogenised to the carbonaceous materials only as circumstances require. In the milk of the cow, the carbonised materials are as two to one, but in the food of adult animals they are as six to one. The large quantity of casein in milk is required for the rapid development of the body; the butter, a highly carbonised material, is required for supporting a large amount of animal heat. It is, consequently, a bad thing to feed calves on skim milk, as the butter and casein have been removed, in the shape of cream. Earl Spencer, who is very successful in weaning his calves, feeds them first with new milk, then with skim milk and meal, the meal supplying the necessary azotised and unazotised materials, (azote and azotised are synonymous terms with nitrogen and nitrogenised.) In feeding young animals, as well as young children, they should have good food, and there should be no stinting them as to quantity. That farmer will lose in the end, who thinks to save his milk by stinting his calves. Artificial food is sometimes made, and used as a substitute for milk. The Duke of Northumberland employs a mixture of treacle and oil cake, bruised flax, and hay. The fruit of Leguminosæ contains casein; hence we may infer that peas and beans would be good food for calves. The difference between casein and albumen is, that the former is much more soluble than the latter, and probably on that account more adapted for young animals. Beans and peas are known to be good things for growing pigs, whilst barley meal is good for fattening them. In the growth of young animals, as well as the fattening of adult ones, all exposure to cold, should be as much as possible avoided. Cold diminishes the vitality of the body, and whatever diminishes vitality, gives a preponderance to chemical action in the body, and injury of some kind is the result. Exercise is also necessary for the rearing of young animals, although it should be avoided in fattening. In order to develope the calf and the lamb, they should be allowed plenty of exercise; but in fattening another object is to be gained. All motion consumes something in the body, therefore motion is so much loss of material in the fattening an animal. In the same manner, exposure to cold, as was proved by the experiments repeated in the last lecture, was a positive loss in the fattening of animals. Stall feeding is beneficial, both on account of warmth and quietude. The primary cause of all this waste is the supply of oxygen; whatever increases the supply of oxygen, increases the waste of the body, and the necessity for supply. Fatting animals are often kept in the dark. Darkness favors sleep, and sleep quietude. It was thus that darkness was favorable to fattening. A case was related of a pig that was placed in a box in the dark, and the sides stuck full of pins, to prevent the animal moving in any manner, and the animal quickly got fat. The fattening of ortolans, in Italy, illustrated this point. The ortolan is a bird that takes its food at dawn of day, and the breeders of these birds take advantage of this, and shutting them up in a dark room, they contrive to let in the light four or five times a day, and to supply the birds with plenty of food. The birds, at every admission of light, thinking the time is come to eat, take their usual quantity of food, and on the light being withdrawn, they fall asleep, and in this manner they rapidly get very fat. Sleepy, good natured pigs fatten fast; but active pigs, as the Irish, never get fat all. A question may still arise as to whether it is better to feed animals in stables or small yards. The manure of the latter is stated to be better, and there is no doubt of this, but then the gain of the manure is lost in the fattening of the animal. Manures will also vary in value, according to the food animals take. The manure furnished from cattle eating turneps, was nothing like the value of the manure furnished by cattle eating linseed cake. Feeding cows for the dairy, was a subject worthy great attention. In the first place, it seemed necessary to supply cows with food containing potassa. Potassa converted albumen into casein—that is, it made it soluble—and soluble albumen is casein, and casein is the most important constituent of milk. It might be a question as to whether casein was introduced directly into the blood from the food, or whether it might not be the result of the destruction of the already formed tissues. Animals fed in the open air, gave milk with more casein than animals fed in close places. The lecturer found more casein in the milk given in the evening after the cows were out all day, than in milk given in the morning after the cows had been standing all night. The tissues are consumed by exercise, and thus yield the casein. Parturition makes a great demand on the powers of the system, and Braconnot found that the milk of a cow directly after calving, contained 15 per cent of casein, a much larger proportion than ordinary. The alkalies, set free by motion, convert the albumen into casein. The butter in milk is not introduced, as Dumas asserts, with the food. It is formed from the starch that exists in the food. The only change necessary to convert starch into fat, is the abstraction of oxygen. The sugar of milk is a peculiar compound; it consists of starch, with two proportions of water. The state of the mind affects the secretion of milk. In woman, anger, sorrow, and anxiety, affect their milk so much, that children suffer very much, or even die, from the effects of partaking of it. For the same reasons, cows should be kept free from all kinds of irritation. When at a distance, they should be allowed to walk to the milking place at their own pace, and never be driven. Exercise is bad for the butter. Where much exercise is allowed, the produce of butter is small; this arises from the oxygen consuming the carbonaceous material that would otherwise be secreted in the milk in the form of butter. In summer, flies torment cows in the day, and they do not yield so much butter. This may be remedied by sending the cows into the field at night, and keeping them at home in the day; but this must only be done in summer, as it would be a bad system during cold nights. Stall fed cows produce most butter; and where butter is the object, cows should be turned into the richest pastures. With regard to the pastures for producing casein, or cheese, there is a very general impression that poor land is best adapted for producing cheese. In general, in cheese districts the pastures are poor. It is, perhaps, the exercise which the animals take on poor land, in order to obtain food, that (for reasons before stated,) develops the casein in the milk. Stall fed cows yield much less casein than those fed in pastures. Cows that are required to yield cheese, should not be kept poor, but it is desirable that they should have to travel some way for their food. Some foods that animals eat, flavor their milk, as Swedish turneps; buttercups color it. Many plants may affect cows when taken with their food. The lecturer, a short time since, was in company with Dr. Daubeney, and Dr. Buckland, in Somersetshire, where they met with a farmer, who stated, as a singular fact, that he had two pastures, the one of which, when he turned his cows in, they became purged; and the other, when he turned them in, produced constipation. The farmer could not account for this; but Dr. Daubeney, on examining the fields, found that the one which purged the cows, contained a large quantity of purging flax (Linum catharticum,) with the grass, whilst the other contained an equal abundance of the common tormentil, or septfoil, (Potentilla tormentilla,) a very astringent plant, which at once accounted for their peculiar action. In Scotland, they procure good milk from stall fed cows, by feeding them upon malt refuse, and bean and pea meal, and giving them beer to drink. The malt refuse supplies the materials for butter and sugar, the beans and peas the casein, whilst the beer keeps up the animal heat. Water would carry off the heat, besides acting injuriously by dissolving the blood globules.

The principles of chemistry will also enable us to assign the causes, and in some measure to prevent the occurrence, of diseases among cattle. What is called consumption, rot, foot rot, &c., in cattle, arises from a slow combustion or destruction of their tissues, by the agency of oxygen. The same process goes on in vegetables; and it is well known that this process can be communicated from one vegetable to another, as from an apple to an orange, &c., and decaying vegetable matter will communicate this process to an animal. These diseases always occur amongst animals closely kept, where there is much decaying vegetable matter about. Animals exposed to drafts do not take these diseases; the draft carries off the decaying ferment. When this process is established in the intestines, it produces diarrhœa, and this probably arises from animals consuming bad food. Red water and black water, arise from the same disease extending to the kidneys. Rot in the feet, comes on from the same cause. It always occurs at that season of the year when vegetable decomposition is greatest, and occurs to the greatest extent where animals are obliged to tread on decaying vegetable matter. The treatment of these diseases should be by anti-putrescent materials, such as chlorine and the empyreumatic oils, &c. These will disinfect the stalls or sheds where animals are kept.

Dr. Playfair then stated that he had a few observations to make on the character of the internal and external structure of the organs of animals, in order to arrive at a knowledge of them as indications of their capacity for fattening and reaching an early maturity. These observations he wished to be put to the test of experiment, as he was aware that some of them were opposed to generally received views. First, with regard to internal structure, which was the most important. It was generally considered that animals with large chests fattened best, and it was supposed that all animals with broad round chests had large lungs. But this is not the case. Sheep have round chests and small lungs. Horses have narrow chests and large lungs. South Down sheep have narrower chests than Leicester sheep, yet they have the largest lungs. The Leicester sheep are known to fatten soonest. He spoke here of the aboriginal breeds of these animals. He had asked butchers, and they were unanimously of opinion that the fattest cattle had small lungs and small livers. Now this was a necessary consequence of the preceding principles. Where most oxygen was taken into the system, there would there be the greatest destruction of carbon, and consequently less carbonaceous material deposited in the form of fat. If two pigs had the same quantity of food, and one had lungs of double the capacity of the other, that pig would only appropriate half as much of its food in the form of fat. Milk with much butter in it, was known to be produced by cows with small lungs. The same held good with regard to the liver; where there was a large liver, there would be a large secretion of bile, and a large destruction of carbonaceous matter. If two animals ate 60 lbs. of food, and one secreted 37 lbs. of bile, and the other only 30 lbs., the food that was not formed into bile would be converted into fat; hence the gain on the animal with a small liver. With regard to external signs, small bones indicated a delicacy of constitution, smallness of lungs and liver, and a tendency to fatten rapidly; whilst large bones indicated just the contrary. The "mellow" feel of an animal depended on the resiliency of the cellular tissue of the animal, the tissue in which the fat is deposited. When there is much mellowness, it arises from the blood being easily pressed from one part of the cellular tissue to another, and indicates a susceptibility to fattening. The reason why animals get more rapidly fat at the end of their feeding season is, that the fat accumulating in the abdomen, presses upon the diaphragm and abdominal muscles, and thus prevents the more complete action of the lungs, and consequently the destruction of the carbonaceous material, by the inhalation of oxygen. The fat also prevents the oxygen being absorbed by the skin, and diminishes by its pressure the capacity also of the liver, and thus also adds to the fattening process. Large ears indicate a general coarseness of bone and muscle, and the same condition of lungs and liver, and are thus indicative of a small capacity for fattening. There were other indications which might be referred to, but the lecturer hoped these hints would be sufficient to set inquiry afloat on a very important subject. He apologized for what he considered the incomplete evidence he had brought forward to establish some of his views, but stated he had experiments in progress, which he hoped would throw more light on many of the more obscure points to which he had alluded.

Lord Spencer proposed a vote of thanks to Dr. Playfair, for his lectures, and stated how much gratified he had been in listening to them. He hoped agriculturists would see from these lectures, the great benefit likely to accrue to them from a knowledge of the principles of the science of physiology and chemistry. Mr. Pusey seconded the motion. Dr. Playfair, in returning thanks, stated that he had drawn up a series of statistical tables for circulation amongst butchers, for the purpose of gaining information on the internal structure of the animals which they slaughtered.

Address of the Hon. Garnett Andrews.—We have received a copy of the Address delivered by Judge Andrews, before the Planter's Club of Hancock co, Geo., Nov. 4th, 1842. The historical progress of Agriculture, the advances it is making in the southern states, the improvements in the agricultural processes, stock, &c. of the day, and the high standing of the farmer, and the position he should hold, are well and forcibly given, and we think cannot fail to exert a most favorable influence wherever the address is read. This address is only one of the many proofs we are almost daily receiving of the attention that an improved Husbandry is receiving at the South.

Original Papers from Contributors.

SOILING CATTLE.

Messrs. Editors—From the many letters addressed to me since the publication in your November No. of a communication relating to Bokhara clover and soiling, it seems necessary that I should explain what appeared to my respectable correspondents so extraordinary—the having fed so numerous a herd from so small a quantity of land.

My stock of cattle for the last three years, has not been less than 40 head, which, had I pastured in the usual way, would certainly have consumed all the grass on my farm, leaving none to mow, which I obviated, as I said, "by keeping them in good condition on some 3 to 4 acres." It would have been better, had I said, *with the aid* of 3 or 4 acres in Lucerne, Rye and Clover, which enabled me to save more than one hundred tons of good hay.

I must also add, or throw into the account, a lot of 8 or 9 acres, in which there is a stone quarry. Its condition may be understood when I say, had it been allotted solely to one cow for the season, she would have been doomed to short commons. There was, however, good water in the lot; this, with the change and exercise it furnished, made it of considerable value for the purpose of soiling. It may also be proper to remark, that I own a woodland farm, distant about two miles from the homestead. Thither I send, in the spring, about a dozen dry cattle. This division left me on hand last summer, to provide for at home, about 20 head full grown cattle, and a few full blooded young heifers, and several calves.

My resources were two acres in rye and clover; both seeds sowed at the same time, the previous August, and one acre of lucerne, in the spring of 1841. I also sowed, in order to be fully provided, an acre of Indian corn, broadcast, which was not used green; it was cut and cured for winter fodder. I began to cut the rye for the cattle in the middle of April; it was very thick and quite tall, shooting into head; before through with it, the heads were formed. It was cut high, to save the young clover that stood with it. The rye fed off, the lucerne was ready; stalks as high as 2½ to 3 feet. When the lucerne was fed, then the rye and clover was fit for cutting; and it was surprising to see the second crop of rye so thick and tall. This time, clover cut with it. This through, the lucerne, which may be called "cut and come again," was provokingly tall, and yielded a heavier crop than at first. Then the clover which had been once cut, was ready, and before through with it, the lucerne was again fit for cutting. It and the clover were cut alternately, or fed together, as convenience or fancy might determine. Before my season for soiling (the middle of August,) ended, the lucerne's third, and clover's second crop, were not consumed. The remainder was cut for the hogs, who had all the leavings of the cattle previously. In fact, this proved very beneficial to them. I had about 20 large hogs, and some sows and pigs. In the hot weather, confined as they were to their pens, what the cattle left of the rye, lucerne and clover, was refreshing and cooling to them.

I said my season for soiling ended the middle of August. Why? Because I cut no second crop for hay. The cattle were then turned in upon the orchard grass and clover fields, "up to the eyes," and from middle of Sept. till 1st October upon the timothy fields—in all, some 60 acres, on which they made but little impression. Early in Nov. they were withdrawn, and put to turneps and other roots, of which I have generally a large supply for winter.

No one can see my grass fields in winter, without being surprised at the thick and closely matted sod that so perfectly covers them. Indeed, were a sensible farmer led over them blindfold, he could not but appreciate their condition, for their softness and elasticity would prove it to him; and this too, on some of the highest lands in the highlands of the county of Philadelphia, washed by the Schuylkill, and the more romantic and precipitate Wissahiccon, on whose banks, in my immediate neighborhood, the laurel grows as luxuriantly as on the shelving slopes of the Blue Mountains.

But to return to the feeding the green food. That cut late in the afternoon, was fed early next morning; that cut early in the morning was fed at noon; that cut about noon was fed that evening. This was the general practice. No more was brought into the stables at a time, than what was supposed to be required for one feeding. When the cattle were fed in the morning, they were turned out to the yard, and there left to stand for at least half an hour, or while their troughs and stables were being cleaned; then drove to the quarry lot above described. The yard was then cleaned, every dropping put away carefully on the dung heap. Before, or by 11 o'clock, they were brought home and fed; and by four in the afternoon, when the sun was declining, turned out as in the morning, drove to the lot; from which they were brought back by sun setting, and fed—remaining in the stables all night. The cattle had no other food, except occasionally a little good hay, which they were provoked to eat a handful of, as often as possible, and which is very necessary where so much green food is consumed. If the hay be thrown to them in quantity, while on green food, they will but waste it, not eat it. The best way is to tempt them by a handful, which, if they bite at, and eat, they may then be served with a small wisp in their troughs or racks. This, with a regular supply of clean salt, was all the food they had from middle of April, till middle of August, a period of four months.

Now as to the expense. One man and a boy, whose united wages were seventeen dollars per month, did all. The patch from which the food was cut, was, as it should be, close to the stables. The supply was brought in on hand barrows, wheeled into the entry, and served by hand into the troughs. Sometimes, when the horses were not specially engaged, a horse and cart was permitted; but this led to bringing too much at a time, and its being tilted at the door, carried on a fork some distance, tossed and turned too often, which rendered it objectionable, to say nothing of the danger of the food attracting some dirt or rubbish. Cleanliness in feeding cattle, is at all times essential, but in soiling it is indispensable; unless the troughs or racks are well cleaned after every feeding, and the stables kept clean and well ventilated, the cattle will assuredly fall off in appetite, if not take a specific disease. The expense of this practice was in reality nothing to me; it was some work superadded to the man and boy, who would be engaged taking care of this number of cattle, in cleaning them, driving them to and from the fields—the Durhams having to be milked three times a day—the keeping the stables clean, and taking special care of the manure. But suppose this man and boy to be extra help, then am I sure it cost me not a farthing. Every two horse loads of good manure, purchased in the city, laid down on my place, will stand me in $5.00. Then am I free to say, that the extra quantity of manure saved by soiling, was not less in the period of four months, than 20 loads. From this is to be deducted extra straw, rent of the three acres, and cost of producing the green food. But the great profit lay in the many acres producing two tons of hay to the acre, which if the cattle had been turned out upon, by the 1st of May, would have been despoiled; and which was prevented, by feeding them from the three acre patch, behind the barn.

Simple as these details are, they may seem to some difficult to put in practice. To such, I can only say—try; but let them not begin till they are prepared, having a good patch of orchard grass and clover, lucerne, or corn. Rye, I do not recommend; when quite young it may do, but when in head and filling, it is not good. I adopted it because it came early. How many are there, who, if they would mow the headlands of grain, corn, and potatoe fields, might in this way furnish a considerable item of the food requisite for soiling, to which might be added the extra shoots in corn hills; all this would benefit the lands by clearing the weeds from the fences, and it would pay, so far as the growing corn is concerned. Our southern friends might derive much benefit from partial soiling. A close or strict soiling, in our climate, I would recommend to none. But the appropriating one field, where there is water or shade, for air and exercise, while many fields may be used for cropping, that otherwise would be made bare by the cattle, and their equivalent in grass made from three or four acres, is a practice that may find favor with all, on arable, light, upland soils. Respectfully,

James Gowen.

Mount Airy, Philadelphia, Feb. 6, 1843.

CHARCOAL AND ROTTEN WOOD AS MANURE.

Messrs. Gaylord & Tucker—From Liebig, I learn that carbonic acid, water, and ammonia, contain the elements necessary for the support of vegetables, and that as nature does not in general furnish these ingredients in quantities sufficient for the perfect and full extent of development of plants, we should supply the deficit by art. The best and cheapest mode of doing this is a mooted question, but it does seem to me, that if Liebig's theory is correct as to the qualities and action of charcoal and rotten wood, they must be among the most valuable manures in existence. We are informed by this author, that charcoal has the power of absorbing 90 times its volume of ammoniacal gas, besides a large portion of carbonic acid; that decayed wood possesses the same power in the proportion of 72 to 90; and that where these articles are used as manure, it is by virtue of this power, through the medium of water, the roots of plants are supplied with nourishment; which supply is renewed as often as abstracted. There is, however, this difference to be noted between the coal and the decayed wood; the first enters into fermentation and putrefaction so gradually, that it will remain as coal for perhaps an age, while the last is decomposed in a year or two. The remains of coal will be principally carbon, and the remains of the wood will be principally humus or mold, both of which are yet valuable; as the first is a direct food of plants, and the last has the power, to a considerable extent, of condensing both carbonic acid and ammoniacal gases. In addition to your answers to an inquiry, as to the action of charcoal as a manure, given in the last No. of the Cultivator, I beg leave, Messrs. Editors, to say, that from reading and observation, it has the further property of preserving plants unchanged in their vital power, for a long space of time, so that the plant obtains time to develop the organs which are necessary for its further support and propagation. And let it be remembered that we know not what time nature has prescribed to the growth or productiveness of vegetables; therefore it is our duty, by every means in our power, to stride forward as near to the goal of perfection as nature will permit.

From experiments made by E. Lucas, it seems that coal of pine wood is preferable as manure, to any others, both on account of its porosity, and the ease with which it is decomposed; but from what Liebig says, I infer that if the coal never decays, so much the better, for in that case, it is ever acting, and ready to act, in all the means and ways above enumerated. As to the porous quality of pine coal, I do not know that it is more so than chestnut or poplar; out of which, I have lately made, and am yet engaged making coal. And now, Messrs. Editors, I must beg your assistance in determining on its preparation and application. Last week I pounded about 500 bushels of coal, and cast it over the litter of my cattle yard; and if you do not advise to the contrary, I shall in the course of some 40 or 50 days, cast on about 1000 bushels more. I am inclined to think this will prove to be the most expeditious, uniform and economical method of application; but what say you as to this, and as to the quantity per acre? And do you think that coal from the size of shot to the end of the thumb, is sufficiently fine?

On my premises, I have a large quantity of rotten wood, which I am mostly using as a compost with ashes and animal flesh. Please say as regards this process?

And yet one other question if you please. What think you of the placing of sundry large open vessels, over ground needing manure, filling these with water, standing till putrid, putting in pulverised charcoal, and letting off by the spigot?

I have several hundred acres of surplus timber, consequently the coal costs me only the burning.

Amherst co. Va., Jan. 15, 1843. Za. Drummond.

☞ We are inclined to think favorably of the course adopted by Mr. D. in using charcoal. By spreading, or mixing it with his manures, he prevents the escape of ammonia, and secures a more equal dirtribution. We have no means of determining the quantity that may be used per acre, nor, from the nature of the material, should we apprehend any danger of excess. To produce the best effect, charcoal should be made fine. In the cases cited by Mr. Hepburn, in his valuable paper on the use of charcoal, in the Transactions of the N. Y. S. Ag. Society of last year, the coal was applied in a fine state, and it is probable much of its value would depend on this. Rotten wood, like peat, or muck, to become efficient at once, should be composted with ashes, animal manure, &c. Where flesh is used in the formation of composts, charcoal will be an excellent addition, absorbing all the disagreeable gases liberated, and retaining them for the use of plants. We should question whether the advantages of the putrid water and charcoal, as proposed by Mr. D., although it would doubtless be valuable in irrigation, would repay the expense of the process. Experience will doubtless prove that charcoal is by far the most durable of manures, and from its efficiency in the few instances where it has been used, promises to be one of the most active.—Eds. Cult

MANAFACTURE OF POUDRETTE.

Messrs. Gaylord & Tucker—I promised some time last year, to give you a short account of my method of preparing chemical manures from human excrements, and I will now proceed to redeem that promise, hoping that it may be useful to some portion of your subscribers. First, I collect the stercoraceous matters separately, in large vessels or hogsheads; after the urine has become putrid, wich will require but two or three days in warm, or ten or fifteen days in cold weather, I then add to the urine, sulphuric acid very slowly, which, if the urine is putrid, will cause immediately a powerful effervescence to take place. The acid must he added until effervescence ceases; by this process, the carbonic acid is driven off, a portion of sulphate of ammonia is formed, and the urine ceases to be volatile. I then add the liquid to the solid excrements, incorporating them well together, until a very thin batter is formed. Into this mass I stir in charcoal finely powdered, according to my judgment, without regard to any precise quantity. This done, I spread the mass upon tight boards in the open air, to dry, protected from the weather by a shed, open to the south so as to receive the sun; stir well, frequently, until it is dry; then pulverize with a spade, and barrel it up for the use of crops.

Manure made in this way, (without being nice about technicalities,) I call Poudrette. Of its value, I can speak in the highest terms. When properly made, it is almost completely deprived of smell, the application to crops easy, and its effects powerful. I made an experiment with it last year, on sugar beets, in comparison with bone manure, bone manure and stable manure mixed, and stable manure alone. The beets manured with poudrette, came up quicker, grew more rapidly, and maintained a decided superiority to the last, making the largest and best beets. The quantity of poudrette was only a small train to each drill.

I used it also in the culture of corn with entire success. In this experiment, I subjected it to a very severe test. I selected a very poor spot, (I am sorry to say I have too much of this kind of land yet,) put only one and a half gills, accurately measured, upon each hill, at the time of planting, and the result was every way satisfactory, and truly astonishing, proving it to be beyond all question, a manure of great strength and power, perhaps surpassing all others now in use. I shall make about 100 barrels in time for the next crop, at a cost not exceeding 75 cents per barrel, including the cost of barrel, which I shall use chiefly in the culture of corn, and as a top dressing for red clover, from which I anticipate the best results.

Manure thus made, must in all cases be used as a top dressing. If planted with the seed, it destroys the young germ, and the seed will not come up well. Sulphuric is a cheap mineral acid, and may be obtained in New-York, for about 3½ cents per lb.

Farmers who have the urine on their farms, after treating it with sul. acid as directed above, may dilute it with water, and apply it to their crops in the liquid state, by a common watering pot; and treat the solid excrements with charcoal alone.

Can you give some plain directions about the operation of making capons? Very truly, yours,

GEO. WOODFIN.

Richmond, Va., Feb. 1843.

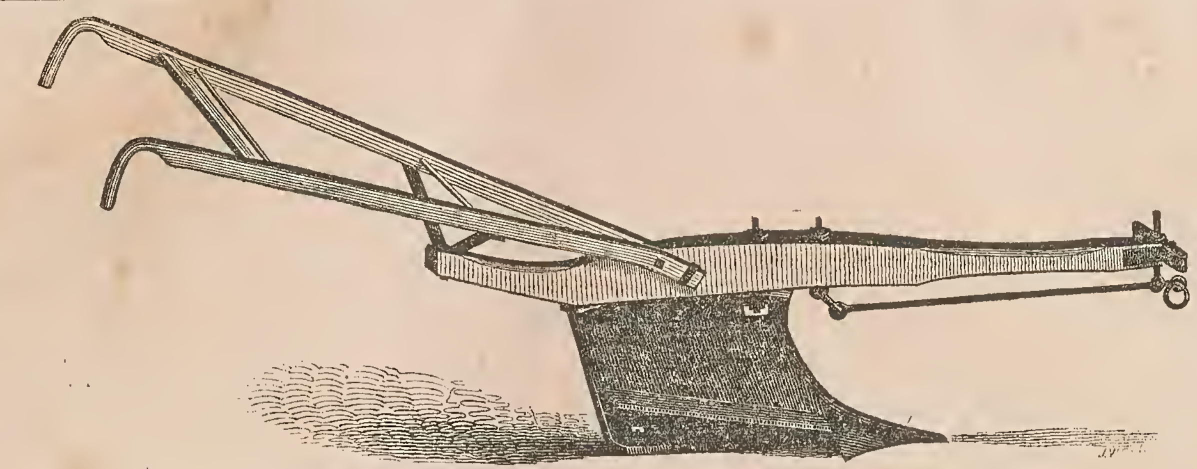
Our correspondent must have overlooked the communication of Mr. Keeler, in our Dec. No. of last year, in which ample directions were given for the performance of the operation of making capons, and to which we refer him for the information he wants.—EDS.

ASHES.

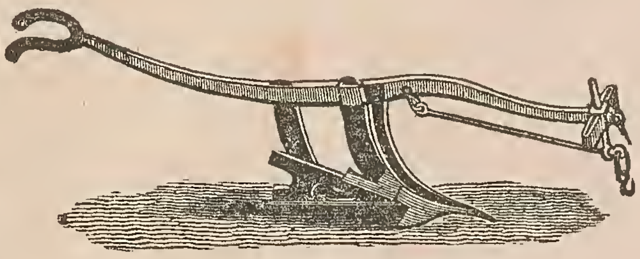
MESSRS. EDITORS—I hope our farmers will take your advice 'not to sell their ashes,' but use them on their own farms. Let them make it a rule to save all the ashes they make, and to buy all they can. There is no mistake in the benefit from their use on grass lands, and on meadows. I have seen the good effects of a load of leached ashes, spread and plowed in, for ten years in succcession, in the grass and otther crops.

L. DURAND.

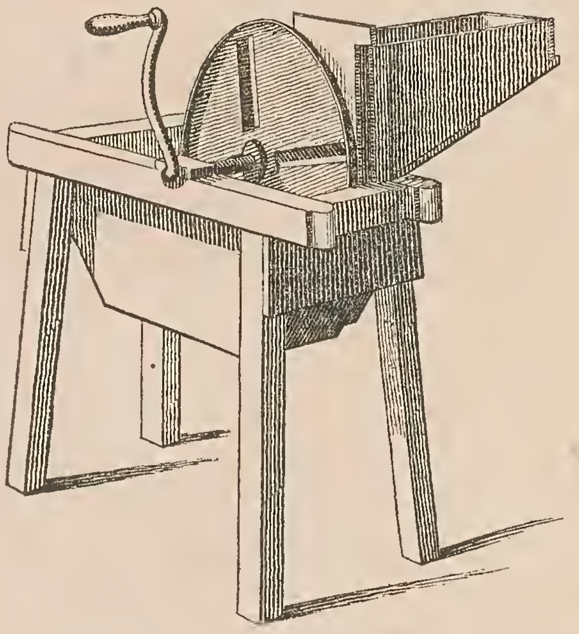
Derby, Ct., Feb. 1843.



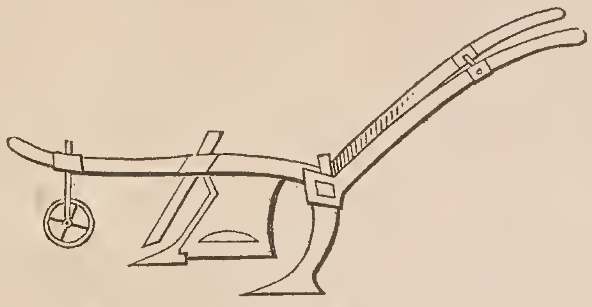
Ruggles, Nourse & Mason's Subsoil Plow.—(Fig. 21.)



Smith's Subsoil Plow.—(Fig. 22.)



Warren's Root Cutter.—(Fig. 24.)



The Charlbury Subsoil Plow.—(Fig. 23.)

IMPLEMENTS OF HUSBANDRY.—No. III.

MESSRS. GAYLORD & TUCKER—At the Fair of the New-York State Agricultural Society in Sept. last, I exhibited a subsoil plow, made by Messrs. Ruggles, Nourse & Mason, of Worcester, Mass., of which the above figure (21,) is a representation, which escaped the notice of the committee, and was not mentioned in their report, which I must confess, surprised me not a little, as it was a new implement in this country, and destined, in my humble opinion, to be of very great service in cultivating old and nearly exhausted lands.

The subsoil plow is not a new invention; but was in use in England, more than 50 years ago, and recently brought into prominent notice by Mr. Smith of Deanston, Scotland. In Dickson's Report of Lancashire, is the following notice of the "Minor or deep-stirring plow:

"There is another tool of the plow kind, somewhat similar in construction, which was introduced into the county, nearly at the same period as the trench plow. It simply consists of a plow-share, firmly fixed to a strong beam by means of a strong sheath and handle, without any mold-board. It is usually drawn by four or more horses, being made to follow in the furrow of the common plow, so as to penetrate into, loosen, and stir up the under soil, without turning it up, to the depth of from 8 to 14 inches below the track in which that plow had gone."

No. 22, is a figure of Smith's subsoil plow, and the following description of it, is by Mr. Morton, in his prize Essay, published in the "Farmers' Magazine," (London,) July, 1842, who says:

"Smith's subsoil plow consists of the ordinary frame work of a plow, without the mold board, made strong enough to stand the shocks and the strain to which an implement requiring the force of four or six horses to work it, must be subjected. This frame work is about 15 feet long. A sole plate on which a feather-shaped or pointed sock slips, is attached to it by means of two uprights, or curved coulter. The height of the plow, when held in a working position from the sole plate to the beam, is about 22 inches. It is thus enabled to go to a depth of 20 inches. From the furrow side of the sock, a spur projects, over which the mass of subsoil cut by the coulter and share, is raised and broken, and falls down again."

Now, the Worcester subsoil plow, differs in several particulars from Smith's. The handles and beam are reduced in length, and made of wood, and the whole implement reduced in size, makes it much lighter, and being shortened, can be turned round in much less space. In place of the spur, as on Smith's, this has an inclined plane, which raises from the feather of the share, and extends back to the heel of the plow. It is about three inches wide, lies against the upright, and raises about six inches behind. By means of a slot in the points of attachment, it can be raised or lowered at pleasure. By this inclined plane, the soil is raised, pulverised, and partially mixed, leaving it in a loose, friable state, without bringing it to the surface. By this simple contrivance, the draft has been so much reduced, that two common sized horses are amply sufficient to work it from 8 to 10 inches below the bottom of the furrow of the plow which precedes it, in a loamy soil, which is free from roots and stones. The greatest improvement, however, and especially at the present time, is the price at which they are offered, being less than one-fifth of the imported article. One of Smith's was imported in 1840, by Messrs. Ellis & Bosson, of Boston, at an expense of about $80. D. D. Campbell of Schenectady, imported another about the same time, or soon after.

The price of the Worcester subsoil plow, is $15, and can be had of the proprietors at Worcester, Mass., and of Messrs. Pruyn, Wilson & Vosburgh, Albany.

I have tried one of these plows, and was much pleased with its performance, and the ease with which the horses performed their work.

The expense of cultivation, by subsoil plowing, is much increased by the present mode, as it requires an extra hand and team to go over the same ground, and at the same time as the first plow; and to diminish the expense of the operation of subsoil plowing, and to adapt them to the wants of the small farmers, several attempts have been made in England, to combine the two implements in one. The first of them by Mr. Pusey, of which a figure is given above, and called the Charlbury subsoil plow:

"It combines in one implement, both the plows used in the operation of subsoiling. It not only stirs the subsoil, but opens the furrow in which the subsoil plow works. It consists in the attachment of a strong tine, similar to those used in Biddle's scarifier, to the common plow, in a position in which it acts after the furrow slice has been turned."

"This implement," says Mr. Morton, "doing all the work, requires according to an experiment recorded there, less force to work it than the subsoil plow, (!) doing only one portion of the operation. It cannot, however, be so efficient in thoroughly stirring the subsoil, as the original implement. The other attempt, at diminishing the expense of subsoil plowing, is by Mr. Armstrong of Stirlingshire, from which he received premiums from the Stirlingshire Agricultural Society, and from the Highland Society."

The following is a description of it, as given by Mr. Smith, at an agricultural meeting. It appears the inventor has adapted the principle of Wilkie's turn-wrest plow, to Smith's subsoil plow; and if I understand the principle of it, it is just what the American farmer wants, as one hand with one team, can perform both operations:

"The general frame work is that of a subsoil plow rather under the medium size, and to it is attached a hinged mold board, similar to the mold board of Mr. Smith's hill-side or turn-wrest plow. By means of this arrangement, the plow can be used for removing the furrow preceding the operation of the subsoil plow; and when the furrow has been removed, the mold board being moved upon its hinges from its working position, rests over the beam of the plow, whilst the instrument is used for subsoiling in the bottom of the furrow just removed. Thus the operation of removing the furrow and subsoiling, can be alternately performed with the same implement, by the same plowman, and the same team of horses, by a simple movement of the mold board, which is done in an instant, by the hand of the plowman, at each turning. The additional weight of the mold board, serves to keep down the plow whilst subsoiling in different grounds. The judges consider this implement well contrived, and as being an important boon to the small farmers, and as certain to give great facility to the extension amongst them, of the admirable system of subsoil plowing."

Every person that feeds roots to his stock, and more especially cattle, should have some kind of an implement for cutting them. I have used one of my own construction for the last seven years, and while it was at the smith's for repair, early in the fall, my roots were cut with a spade, and the pieces being of all shapes and sizes, one of my cows got choked with one of the pieces, which, however, was of but little consequence, as she was soon relieved with one of Caley's Probangs, which I have by me; and here I would remark, that I would not be without one of them, for five times their cost.

Having some business in Troy, in January last, I stepped into the Agricultural store of H. Warren, where I found a root cutter of his own construction, just finished. Some potatoes were procured, and a trial made which proved very satisfactory. Mr. H. insisted on my taking it home and trying it with various kinds of roots, which I did, and can safely say, that it is the *best* implement I have ever seen in use for that purpose. It is light, portable, and takes up but little space. The circular plate or disc, is of cast iron, mounted on a horizontal shaft, to which the crank handle is attached. On this plate, and parallel to the face, the knives are set, radiating from the center. There are four knives, and the thickness of the cut is regulated by the distance of the edge of the knives from the face of the plate, and they can be moved in and out, by means of slots through which the screws pass, which secures them in their places. The bottom of the hopper is also moveable, and can be adjusted to suit the thickness of the cut. The hopper is set very slanting to the wheel, by which means the roots press against the knife, by their own weight, which is found sufficient to hold them within the stroke of the knife.

It requires but little power to work it, as a boy 14 years old, can cut one bushel per minute; but it is capable of cutting two bushels per minute, by having a man to turn and a boy to feed. The knives can be removed or replaced with the greatest ease, by turning two screws. The knives being flat and straight, can be made by any ordinary blacksmith, and replaced with very little expense.

To my Dutch friends, who are in the practice of making *Sour Krout*, it affords great facilities, for it will cut cabbage "to a shaving," and a tub full, before they could say "dunder un blixum."

They are now on sale at the store of Wm. Thorburn, Albany, and by the proprietor, H. Warren, River st., Troy, at $10 each.

C. N. BEMENT.

N. B. After No. II. was written, Mr. Langdon informed me that the price of the improved Horse-hoe, would be $10, and I promised to have it altered; but not seeing the proof, the price of the first, $8, was retained. Ten dollars is as low as they can be afforded.

Three Hills Farm, Feb. 1843.

CHOOSING CATTLE.

MESSRS. EDITORS—It may not be amiss to give Mago's directions for choosing cattle for the plow. Our farmers will then see how much they have improved in their judgment on such cattle, within 2300 years:

"There are certain rules for the farmer to attend to, which Mago has thus laid down for his instruction. The steer should be young, strong, with large joints; long, blackish, and stiff horns; broad and curled forehead, rough ears, black eyes and lips. white and distended nostrils, long and bowed neck, white dewlap, which should hang down to the knees, a broad chest, large haunches, a spacious belly, extended sides, broad loins, exact and even pace, round buttocks, straight legs, not far asunder, and rather short than long, stiff knees, long and hairy tail, a short and thick head, red or brown color, and soft to the touch."

WM. PARTRIDGE.

New-York, Jan., 1843.

"For all practical purposes, conscience is the best casuist, and to do as we would be done by, the safest rule."

FARMING EAST AND WEST.

In a letter from A Farmer of Richmond County, New-York, to Solon Robinson, *of Lake C. H., Indiana, dated at Staten Island, Dec.* 12, 1842. (*Lat.* 30° 30'.)

Dear Sir—The October No. of the Cultivator, (vol. IX, p. 154,) contains an article headed "Western Farming—Wheat and Wool," which attracted my attention, and shows on what a grand scale agricultural operations are conducted in the new and western states of our republic. There is nothing like it in Europe, not even in Great Britain, in some parts of which a whole county is owned by a nobleman, and extensive tracts are leased to farmers with large capital, who have the advantage of employing men and women at exceedingly low wages. These persons are denominated "Hinds," and "Bondagers," who (as related in Howitt's Rural Life in England,) are kept in mean and abject servitude. Notwithstanding these advantages of low labor, there is nothing to compare with the magnificent husbandry of Ohio, Indiana, and Illinois, where the land is cultivated by freemen.

Upon seeing the article above alluded to, I was delighted to read of a field of wheat of *five hundred acres*, and a field of Indian corn of *one thousand*, and even *twelve hundred acres*. Were I younger, (thinks I to myself,) I would go a considerable distance to see the glorious sight. Oh! how my heart leaped at the idea of such a blessed country as we inhabit, where Providence has poured out in such profusion for our use, every production that the earth can yield, and more than our merits deserve, or our wants require.

The contrast between farming in these parts of the United States, in the small way, and agricultural operations in the west, is so great, that some of our husbandmen can hardly conceive how you carry them on. Here the land has been divided, and sub-divided, until most of the farms are small, and we have been obliged to borrow the maxim and practice of Connecticut, to

"Till little, and that little well."

Hence our movements are like those of a small boat, contending against wind and tide; while yours are like the motions of a ship of the line, with a stiff breeze, and a fair prospect ahead.

The article on "Western Farming," however, has suggested some inquiries, which I have thought you could answer more satisfactorily than any one I know. You may be surprised at such an application from one with whom you are not acquainted, but be assured that the writer of this, though he resides in an extreme corner of the state of New-York, is well acquainted with you, and sees or hears from you almost monthly, in the Cultivator, and admires your writings.

Know then, that after perusing the abovementioned account of "Western Farming," it was read to one of my neighbors, called in for the purpose, who cultivates forty or fifty acres, *who is not a book farmer*, but a person who jogs on in the old way, and makes a tolerable living for himself and family, without reading the Cultivator, or any other agricultural journal. He listened with attention, until I had finished reading the article. After a short pause, he asked,

"And do you believe all that?"

"Certainly," I replied.

"So do I," said he, "believe it to be—a lie."

"But, my dear sir," said I, "you must recollect that in the western states, land is cheap, and the virgin soil only requires to be plowed, and sowed, and the crops gathered."

"And don't we plow, and sow, and gather our crops?"

"Surely we do, and we have to plow, and re-plow, manure, and harrow, and cross-harrow, and house our crops, secure and husband our straw, husk our corn, and gather our stalks; and when all is done, we expend more labor with less profit, than they do in the west."

"What becomes of their straw when their grain is thrashed, and their corn stalks when their corn is husked?"

"I presume these are of secondary consideration, and are left in the fields to rot, or be consumed by fire."

"Read that again about a large field of corn."

"I will, it is as follows," viz:

"Go to the farm of the Messrs. Sullivant, near Columbus, and see on the beautiful river flats, from twelve to fifteen hundred acres of corn, while their fine flocks are covering a thousand hills; or visit the Illinois prairie farms, such as is the one described below, and you can form some conception of western farming."

"Now in the first place, these new countries are not thickly settled, and cannot be where there are such large proprietors, and large farms require many hands to work them. Where for instance, could they get farm laborers in sufficient numbers to plow and to plant twelve or fifteen hundred acres of corn? Lend me your pencil, and let me calculate.

"If you allow, as we do in these parts, that upon an average, one man and team can plow an acre a day, it would require *forty-six* men and teams per day, for *twenty-six* days in March and April, to plow *twelve hundred acres*.

"In the next place, 1200 acres are to be planted between the first and twentieth day of May. In 1841, I planted seven acres of corn, and *eighteen days labor* of men and boys, were required, with two teams part of the time, to cart out manure, drop it in the hills, drop the corn, and cover it with the hoe.

"At the same rate, to plant 1200 acres, would require 3085 days labor, or *one hundred and fifty-four hands*, daily, for twenty days of fair weather. Now where is the farmer, east or west, that can command, employ, and provide for such a regiment of men and boys? Tell me *that*, neighbor, and I may believe these big stories about western farming. Rest assured, they are got up by speculators in land, who want settlers to come and buy the large tracts they have monopolized."

"That may in part be true, but still your calculation is much too large. In the new lands of the western states, they are not under the necessity of manuring as we do, nor do they spend much time in hoeing corn, cutting it down, stouting, husking, or housing the stalks."

"I should like to know then, how they manage such large crops of corn and wheat. In the account which you have read to me, it mentions that Mr. Underhill has erected on the river, 'two large barns,' 30 by 50 feet each. These I do not consider *large barns*, as we have larger ones here in Richmond county, on farms of 150 and 200 acres. It is difficult for me to conceive how they contrive to raise crops of 500 and 800 acres of wheat, and to secure it in season, and in good condition at harvest time. The cradling, the binding, and securing so much grain, must be done in a short time, when it is ripe and ready to be cut, and the interruptions of bad weather, and Sundays, might jeopard or destroy much of it. Mr. Underhill's 'large barns' would not hold the sheaves of grain, from one hundred acres. I would ask then, how many hands does it require to cradle and bind 500 or 800 acres of wheat, where is it housed, where and how is it thrashed and cleaned, and how is the straw disposed of?"

"I cannot solve your doubts, or answer your inquiries, but I will introduce you to Mr. Solon Robinson, who will."

"Who is Mr. Robinson?"

"He is a farmer residing in the northern part of Indiana."

"Ha! ha! ha! how can you introduce me to him?"

"Thus: I will write a letter to him, and he will answer it through the 'Cultivator,' and if you will take that valuable journal, you will become acquainted with him as I did."

"That may all be well enough, but I don't like these book farmers."

"Mr. Robinson is a practical farmer, and knows all about how agriculture is managed in the west. If he was our neighbor, we could see and converse with him, but as we cannot have personal intercourse, his writing it down, and giving us the information you desire in the Cultivator, does not make that information less valuable or true."

"Well, that's very correct, have it your own way, and write; I should like to hear from him. Perhaps I'll take the Cultivator."

Thus, Mr. Robinson, I have my own inclination, and my neighbor's request, to write to you, and request an answer to the several doubts and queries herein proposed, respecting the large crops in the western states.

That you may understand how these doubts and queries have originated, I will furnish you with some abstract statements, showing how we have to strive, and labor, and calculate, to make ends meet, in these parts, where the lands are pretty well exhausted, require renovation, and yet cannot be purchased at low prices.

In the first place, I will give you the whole statement of the labor expended on seven acres of corn, planted in 1841, herein before mentioned by my sceptical neighbor, viz:

24	days work in plowing, harrowing, spreading manure to be harrowed in, harrowing again, and furrowing.
18	days in dropping manure by the shovel in hills, dropping corn, and covering it with the hoe.
2½	days in replanting where the corn from excessive wet, had rotted in the ground, and had been pulled up by crows.
20	days first plowing and hoeing.
13	days second plowing and hoeing.
10	days cutting down and stouting.
87½	days.

Here then we have eighty-seven and a half days labor expended on a seven acre crop of corn, not including the expense of husking, which was done at intervals, partly in the field, and partly under cover in the barn. You will therefore not be surprised at the doubts of my neighbor, when you see the amount of labor we expend on a small crop, and compare it with your magnificent agricultural operations in the west. The value of the manure applied to this crop, was $122.25, which added to the labor, was more than the value of the corn and stalks, which latter were preserved for fodder. The season was too wet and unpropitious for corn, and the crop, though manured at more than seventeen dollars in value per acre, was nevertheless a poor one. The land, however, was improved for a subsequent crop.

In the autumn of 1841, a field of six acres, worn out by preceding culture, was broken up, cleared of rocks and stones, bushes and briars, and stumps, and so highly manured, that it was thought to be in a good condition to bring a crop of grain. The expense of labor and manure, was $155.00; of manure alone, $132.36, or $22.06 per acre. The field was partly sowed with wheat, and part with rye, and seeded with clover and timothy, to bring it into grass for hay.

The winter of 1841 and '42, was very open, and much of the grain was destroyed by frost. The succeeding spring and summer were wet, and the harvest a poor one. The grass however, came forward after the grain was off, and in September, ten loads of hay were cut from the same six acres. But the wheat, the rye, and the hay, would not pay for the labor and manure applied. Thus are we sometimes disappointed on these old lands, notwithstanding our best exertions, and high manuring. But it is not always so, as the following example will show, and also how close we have to calculate to make our profits.

In 1840, I planted ten acres of corn with the following result

Product.		
975 bushels of ears of corn or 487½ bushels of shelled corn, at 56 cents, the then wholesale price,		$279·25
50 bushels hog corn, at 25 cents,		12·50
50 loads of corn stalks for fodder, at $2·00,		100·00
Cobs saved for kindling wood, and ashes, valued at		10·00
Pumpkins grown among the corn,		17·72
		$419·47
Expenses.		
Plowing, harrowing, furrowing, planting, manure and seed,	$131·68	
First plowing and hoeing,	7·57	
Second plowing without hoeing,	3·00	
Gathering corn,	10·00	
Interest on $925·00, for one year, at 7 per cent, cost of the land, at $92·50 per acre,	64·75	
	$217·00	
Of the manure applied, deduct one-third, unexpended in the soil, applicable to the next crop,	39·25	
		$177·75
Nett proceeds of a crop of corn, of 10 acres, in 1840,		$241·72

With these statements before you, an opportunity will be offered of comparing great things with small, the cultivation of the soil by wholesale in the west, and the same by retail in the east. In casting my eyes about me, the freeholders and farmers, neighbors in sight, have 40, 100, 130, 143, 65, and 200 acres of land, &c. I hope you will not fail to make a reply to this communication, to satisfy my fastidious neighbor, and at the same time, gratify your distant friend and fellow laborer, who is a cultivator of the soil, in the county of

Richmond.

SHEEP—WINTER MANAGEMENT.

Messrs. Gaylord & Tucker—Sheep, and particularly ewes, ought to be carefully attended to, this month. To prevent disease and to raise plump lambs, depends upon the care you take of ewes the remainder of foddering time; they should be fed with roots of some description, twice a week: or daily will do them no harm. Sheep, at all seasons of the year, should have a supply of salt, to which they can have access at all times. Mr. S. W. Jewett's mode, (as described in the last number,) is an excellent one. My custom is to place the salt in troughs under the shed. Water is another indispensable. Sheep will drink four or five times in a day, if they can get it without too much trouble. It is said that pea straw, thrown out two or three times in a week, will be snatched with great avidity. Feeding sheep at stacks, and permitting them to help themselves, is poor economy; the wool becoming saturated about the neck, with dirt and grass seed, which it is impossible to cleanse in washing.

To avoid this in a great degree, I propose that every farmer supply himself with sheep racks, as described in Cult. Vol. VII, No. 4. I prefer these to the board racks, because they are much lighter, (the wood, excepting the boards, should be cedar,) more durable, and less liable to get out of repair, and can easily be moved by one person. All must perceive the fallacy in a wet time, of carrying out hay from place to place, to find some spot where the hay will not be trampled upon and wasted. Much is wasted in this way, by some farmers. A rack, as above described, will in a great degree, prevent the grass seed and other substances, from lodging in the wool. There is another advantage in feeding in racks, in time and labor, (if your barns are at a distance,) by throwing in hay enough to last through the day, and it prevents the hay being scattered by the wind.

Another error, in my opinion, which exists among farmers, is in allowing their sheep to wander over their lands, when bare in winter and spring, destroying their appetite, obtaining but little, if any nourishment, and often bringing disease and death among them. This is the trying month for sheep; if you see any declining to eat, remaining behind when the others are fed, they should be separated at once, and receive more care, and more nourishing food. Above all, see that your stock have salt constantly; this is one of the best preventives of disease. Yours, &c.

Shoreham, Vt. Feb. 19, 1843. E. H. Northrup.

AGRICULTURAL SCHOOLS, &c.

Messrs. Editors—I am constrained to differ from many of the best friends and ablest advocates of agricultural improvement, on the important subjects of *legislative aid* and *Agricultural Schools.*

It is useless to say that the farming interests have no need of aid, but it may be well questioned whether they have more need of legislative aid than any other of the great interests of our state, and whether this is the best way of promoting these interests. To say nothing now of those great objections against partial and too much legislation; is there any thing peculiar in our profession, that it can be better promoted by the combined influence of government, than by the healthful influence of individual emulation, voluntary associations, and especially agricultural papers? There are hundreds of farmers scattered in almost every part of the state, stimulated by their interests, by a love of their profession, and by a generous regard for the public good, to carry the improvement of their farms to the highest practicable point. They have all the means of improvement, and by books and papers, they possess all the information the age can afford; and the success of these enterprising men is working a silent, but certain revolution in every county and every neighborhood.

Now what can the state do for these men? It cannot add to their means, or increase their motives for exertion; certainly not, by dividing among them a small sum of money, as premiums for the finest crops or stock. I think the farmers of this country could answer with some propriety, as certain merchants once did, when asked what should be done for them; "let us alone," was their significant reply. The cause of agriculture is advancing with great certainty, and not very slowly. And first among the causes, stands the agricultural press, particularly such papers as the "Transactions" and the "Reports" of committees, on the various subjects assigned them. Next is the all-pervading and silent influence of the example of the successful farmer, appealing directly to the interest, without much exciting the prejudices of his neighbors. I would not omit the mention of agricultural shows; let their value be duly estimated; and so the kindly influence on the social feelings, of the speeches at an agricultural dinner.

In regard to an Agricultural School, although it may look promising in theory, in its practical details, you will find it a very difficult affair to manage, especially for a government or a corporation. If we must have a school, would it not be better to leave it to the direction of individual enterprise? Would it not be better for every young man to learn the practical part of his profession with his father, or at least on the private establishment of some well informed practical farmer. His Chemistry, Geology, Surveying, Mechanics, and every other necessary branch of science, he will of course learn in those institutions, equally open to him, as to those of any *other* learned profession.

I know we are pointed very significantly to the institutions of this kind in Europe, and to the fostering care exercised towards agriculture by some of the European governments, as if to shame us republicans, for our remissness in this matter. But the grand difference in our institutions alters the case entirely. In Europe, the government *stands on the other end;* the few are enlightened, the many are with great difficulty reached by any motives to improvement; they never lead, but they must be led and encouraged by all the means that can be brought to bear on their minds, by those who stand at the sources of influence. But here, agricultural knowledge and the means of improvement, are in the hands of the many, the owners of the soil, who have every motive for the advancement of their profession. Shall we then talk of government offering patronage to the farmers? The farmers are the patrons of government.

Dutchess co. Feb. 1, 1843. N. REED.

APPLICATION OF MANURES.

EDITORS OF THE CULTIVATOR—In forwarding you my subscription for 1843, which I do with much pleasure, as I consider it a dollar well laid out, I will take the opportunity of making a few remarks on the (to farmers) all important subject of manure, which appears now to be receiving the attention, I will not merely say which it deserves, but which mankind are now compelled to pay to it; for in England, as well as on this continent, severe cropping, with non-adequate returns to the soil, has brought many fine farms to so low a state, that the owners must either restore them to their former capability of production, or be ruined.

It is strange, considering mankind have been cultivating the soil since the days of Adam, that no one has yet discovered the best method of restoring its productive powers; one man tells us, that we should take the unfermented dung and straw from the farm yard, and carefully plow it well under, without allowing the sun to shine on it for an instant; by these means we lose none of the gases, *the only valuable part*, which penetrate the clods, render them friable, and furnish food, not only to the roots, but gradually escaping from the earth, are absorbed by the leaves, which, being furnished with respiratory organs on their under side, inhale the exquisitely refined nutriment—and, by their dark green surfaces, show in a few days how well they have fared. This method being one of the easiest, finds many supporters. Next month, we are told unfermented manure *may do in some soils;* but the writer of this second communication, assures the world, that from long experience he has found that the *best way* is, to make every thing you can rake and scrape from farm yard, ditches or ponds, *into heaps*, and these should be turned and well mixed when the fermentation has generated a considerable degree of heat; he then states, that he does not approve of plowing the manure under, as you thereby lose most of the goodness, by *filtration*; he recommends simply harrowing in the compost, taking care to spread it very evenly.

Now, what is a plain matter of fact farmer to do, when he reads such contradictory statements? From all that I have read, both in the Cultivator and other papers and books, I have come to the conclusion, that neither farmers, professors or doctors, as yet know *much* on the subject, and from the recorded experience of many of your correspondents, it is evident that what suits one kind of soil does not suit another, and what makes it more difficult still, is that what is beneficial to one kind of plant or crop, is injurious to another, even on the same soil. It is a good plan for all to contribute their experience, and I will now state one or two facts and observations for others either to *confirm*, *disprove* or *draw useful inferences* from the same. First, the sun does not exhale *all*, perhaps *not any* of the *useful* parts of manure when spread abroad; as a proof, spread manure the end of April, on a portion of grass land, and observe if the crop is not heavier where the manure was spread, than other parts (of equal quality) that had no manure; also observe, in a pasture field not too closely fed, and round each spot where a cow dunged early in the summer, will be seen a ring or margin of grass taller and greener than elsewhere; also, nature spreads all her manure on the surface, dried leaves, blades and stalks of grass, weeds, &c. &c. Secondly, filtration is imaginary; during the fall of 1840, I burnt out several old stumps, but did not scatter the ashes they made; during the whole of the summer of 1841, a belt 12 to 18 inches wide surrounded the spot where each stump had stood, of *taller* and *greener* grass than any other part of the field, and the same superior verdure lasted all last summer; the soil was light and sandy; surely the rain and snow of two years ought to have carried all potash beyond the reach of the roots. What further proved to my mind that *the salts do not filter* down into the earth, some of the stumps had stood on little hillocks as they often do; where that was the case, I observed the verdure *lessening as it descended* the side, probably two feet, when the effect seemed lost. Again, I have seen spots where cattle had been penned at night for a month or two; for *six years* afterwards, the vegetation was double on that spot to any other part of the field, although all the manure had been carefully removed and scattered about; now, nothing but the liquid could have gone into the earth, and yet the rains of six years never washed away the beneficial effects.

I once sowed some garden seeds where a large roll pile had been burnt; those I sowed without disturbing the soil beyond raking in the seed, did well; a square yard or two I dug the depth of a spade, and on that part I had a miserable crop, and every man who has formed a garden on fresh cleaned land, knows that his first crop, when the roots will not allow him to dig or plow, is a good one, and not until he has dug and manured the ground for 3 or 4 years does he raise vegetables equal to the first year. My own views and deductions from these facts I will not now state, as I wish others more able, to comment on them first. I shall have no objection to reply, or state what I think, at a future period.

Goderich, U. C. Jan. 1843. QUERCUS.

REPORT ON COWS, HEIFERS, &c.

IN publishing an account of the State Fair in the Nov. number of the Cultivator, the following report was omitted:

The Committee of the "N. Y. State Agricultural Society," on Cows, Heifers, and Heifer Calves, comprising Classes V, VI, VII, and VIII, respectfully report:

That they have attended to the duties of their appointment, in which they experienced the embarrassment usual on such occasions, from finding the animals *numerous*, while the *premiums* were *few*,—but adopting the rule that a *majority in number* of the committee, should of course in all cases be decisive, they arrived at the following results:

[For list of awards, see Nov. number, 1842.]

Your committee found it no easy matter to decide among so many *fat* calves as were shown in class VIII, their respective *merits* and *faults* being alike covered and hidden by *flesh*, so much so that they were really better adapted for the inspection of a committee of *butchers* than of *breeders*.

The practice, now too common, of *fattening* breeding animals for exhibition, is not only wholly without utility, but is so bad and injurious in every point of view, that it ought to be discountenanced.

It will not fail to be noticed that *all* the foregoing premiums are given to animals of the valuable breed known as "Durham Short Horns," against which kind there was on this occasion, no other breed shown in competition, except *Herefords*, of which there was a beautiful and very creditable exhibition, consisting of a portion of the herd of Messrs. Corning & Sotham, some individuals of which, this committee would highly commend, especially as being good specimens of that important quality, *good handling*, always essential to excellence.

Your committee, (of which a portion, if not a majority, is composed of what might be called "Short Horn men," either by *preference* or *interest*, as Short Horn breeders,) from motives of *delicacy*, not to say *generosity*, did not deem themselves called on *to decide between these two rival breeds*, and *against* the *Herefords*, which would have been for the most part, and *in effect*, their decision, if made on this occasion.

In England, the *home of both breeds*, where *beef* is the *first* and almost the governing consideration, the *Herefords* as a breed, it is well known, have long maintained a sharp and *often successful* competition with the Short Horns, for *feeding* purposes, especially as a *grazing* stock; while it is claimed, and now generally conceded by well informed dispassionate persons in England, that the *well bred* Short Horns have the merit of *earlier maturity*, and are also entitled to the preference for *stall feeding*, and more especially and decidedly so for *dairy* purposes, in which the *Short Horns* and *their crosses* are believed *to excel all other breeds*, and that the *pure bred males* of this breed are *capable of improving all other breeds of cattle;* certainly a most important consideration, and especially so, in this and all the northern portion of the United States.

It is understood that the *Herefords* have not yet been sufficiently *tried* in this country as *milkers*, in the absence of which, there seems to prevail at present an *unfavorable impression* of them as *dairy* stock, which impression it is to be hoped may soon be done away, if, as their friends claim, the Herefords are really a superior milking breed. Some of their *crosses* with native stock, now existing in Massachusetts, descended from an importation of Herefords made many years since, by Admiral Coffin, are understood to have proved excellent milkers.

It is besides claimed for the Herefords, that they will make *good working cattle*, being strong and active, which is not doubted. It is also conceded that the *quality* of the Hereford *beef* is *excellent*. Therefore, taking no more than a fair view of their case, the Herefords must in all probability, prove a highly valuable stock in those portions of this country where the *grazing* of cattle for *beef* is a primary object.

Under these circumstances, your committee would ask in behalf of the newly imported Herefords a *fair chance*, —and that they be allowed after coming from on ship board, to *get well upon their feet*, before they "enter the lists" against the now well established Short Horns. If the Herefords are cherished and encouraged for a time, it is to be hoped that the now favorite Durhams, may by-and-by, in future competition, find in them "foemen worthy of their steel."

If the Herefords were distributed in more hands, so as to give room for competition among themselves, your committee would suggest the expediency of hereafter offering premiums for them in a class distinct from other breeds. Also for *North Devons*, a highly useful and most valuable breed, especially on light soils, and in hilly districts of country.

Your committee cannot in justice, close their report, without remarking that the want of information as to how the animals *had been fed*, also as to the *milking* qualities of the cows, and occasionally as to the *pedigrees*, was much felt by the committee, who in the absence of this needed information, were in many instances left to grope their way in the dark to a *decision*, of course in some cases, by no means satisfactory even to themselves. Nor did we find persons in attendance, to *lead out* the animals for a more full and careful examination, especially as to their *style of carriage or movement*, which it is needless to remark, is, as well as form and *handling*, an essential element of any intelligent opinion, or critical decision on their merits. All of which is respectfully submitted.

DAVID C. COLLINS, of Hartford, Ct. *Chairman.*
I. S. HITCHCOCK, CHARLES BROOM,
W. K. TOWNSEND, R. L. ALLEN,
Albany, Sept. 29, 1842. *Committee.*

HINTS TO FARMERS.

EDITORS OF THE CULTIVATOR—"Economy means management, and nothing more; and is generally applied to the affairs of a house and family; which affairs are an object of the greatest importance, whether as relating to individuals or to a nation. There never yet was, and never will be, a nation permanently great, consisting for the greater part, of wretched and miserable families." In every view of the matter, therefore, it is desirable that the families, of which a nation consists, should be "happily off;" and "this depends in a great degree, upon the management of their concerns."—*(Cobbett's Cottage Economy.)*

There are few farmers, who manage in every respect, all their concerns to the best advantage. Yet there are very many who are constantly guilty of errors, the results of which are truly embarrassing; one of which is being too often repeated to pass without notice. It is this: *selling upon credit*. It may be that I am getting upon controverted ground; be this as it may, my observation at least confirms it. When the farmer sells the product of his farm "on time," he mostly is compelled, as a matter of course, to risk the results of the commercial enterprise of the purchaser. If the result is favorable, he is paid; if not, a crop, or the labor of a year, is lost. It may, however, be said that it is wrong for the purchaser or merchant to sustain all the losses. But let it be remembered, that the merchant risks for the chance of speculation or great gain. If he be successful, the farmer gets but the price of his labor; if he should be unfortunate, the farmer has to share the loss. The rule does not work both ways, and is therefore not a good one.

But I have another reason. Farmers are generally less acquainted with human character than most other classes of men, and therefore more liable to be imposed upon. The merchant who is in the daily habit of scrutinizing human character, is much less liable to be imposed upon, than an individual who is pursuing the quiet pursuits of an agricultural life. The one, from his profession, is wary; the other, unsuspecting. Who has not witnessed with mortification, the two frequent instances of individuals of ruined fortunes, purchasing "upon time," the produce, not only of a single farmer, but of a neighborhood. Within my limited observation, it has certainly too often occurred. It is bad "economy," and so long as farmers continue selling upon credit, many, very many, will be made poor and miserable. "To live well, to enjoy all the things that make life pleasant, is the right of every" farmer, "who constantly uses his strength judiciously and lawfully," under a well directed economy.

There is yet another thing in relation to selling, which I consider bad "economy." It is not selling so soon as agricultural products are ready for market. Many persons are in the habit, when they cannot get just the price they wish, to hold over for the market of next year. Hogs are sometimes turned out of the pen when fat, because pork is lower than we think it ought to be. A horse is not sold, and kept over winter, because the purchaser lacked five dollars of offering the price asked, and ten to one if he is not sold on a credit of some six months, for the sake of the five dollars, and nothing got. Prices may be low, but I hold it as the safest rule, to sell for the best price we can get, whenever we are ready for market. Take an example; let it be the horse. We are offered within five or say ten. He is at his zenith; one hundred is asked, and ninety is offered. There is no sale. The horse is kept twelve months, which is worth $20.00, if he is a horse for sale. The horse is then sold for the price asked, one hundred. Then we have gained five or ten, and lost twenty; which makes in the transaction, a clear loss of ten or fifteen dollars, to say nothing of interest and risks; and this will hold true to a greater or less extent of all other live stock. I look upon this in general, as bad economy, and it deserves at least a more careful consideration than my limits will permit.

But it may be thought that I have overlooked a very important error in the economy of this country—*going in debt*. This is an error which is but to manifest, certainly, to require any thing said upon it. But this much I may say, in connexion with what has been urged above: that it will be hard to avoid it, if the farmer continues the practice of selling his products upon *credit*. Debts are contracted with a view to being met by those that are owing, or in anticipation of the growing crop. In the first instance, there may be a disappointment from some commercial failure—and in the second, by a failure of crops, or in realizing the amount for them that was anticipated. Loans are next to be made, and interest paid, or property executed, either of which is ruinous to the agriculturist. But when the products of agriculture are sold for cash, the necessity of going in debt is avoided. With cash in hand, his wants are supplied with great advantage, purchases can always be made at lower rates, which is interest in advance; and upon this subject (interest,) I intended to say a word, but have not room upon this sheet. It is not alone in the best mode of cultivating the soil—in rearing the largest crops, and the finest stock, that we are to expect independence, and all the multiplied comforts with which an agricultural life should be blĕssed. It is far otherwise. A proper "economy" embraces every thing in the whole circle of our transactions. A. C. STEVENSON.

Green Castle, Ind. 1843.

AGRICULTURAL CHEMISTRY.

MESSRS. GAYLORD & TUCKER—In the December number of the Cultivator, I noticed a communication from Mr. Wm. Partridge, on chemical manures, in which he asserts that Liebig is in error, when he states that carbonate of ammonia will decompose plaster at common temperatures. I was induced from reading the article, to try some experiments on these substances; not because I doubted the correctness of Liebig's statement, but to learn the extent of the decomposition under certain circumstances. The experiments were conducted with much care, and I believe the results are correct. 100 grains of gypsum (sulphate of lime,) were mixed with a cold solution of 70 grains carbonate of ammonia; and the mixture was allowed to remain for 10 hours where the temperature was not above 60 degrees. The clear solution was then separated from the sediment and found to contain 67 grains of sulphate of ammonia and 10 grains of carbonate of ammonia, (undecomposed.) The sediment contained 50 grains of carbonate of lime, and 14 grains of gypsum, which had escaped decomposition. When 100 grains of gypsum were mixed with a solution of 55 grains of carbonate ammonia under the same circumstances, the latter salt was entirely decomposed, and pure sulphate of ammonia remained in solution. The sediment was a mixture of carbonate and sulphate of lime. When gypsum and carbonate ammonia in solution were mixed in the proportion of 100 to 90, the gypsum was entirely decomposed and resolved into sulphate of ammonia and carbonate of lime. Mr. Partridge was probably led into error by the tables of affinity found in the older works on chemistry. Now these tables do not express the true affinity of the substances named in them, but merely the *order of decomposition*, and even for this they are of but little use. For instance, the table tells us magnesia will separate ammonia from its combination with sulphuric acid, and lime will separate magnesia, but the separation is only partial. Lime added to a solution of sulphate of ammonia, will cause a part of the sulphuric acid to leave the ammonia and combine with the lime. So also when a solution of pure ammonia is placed in contact with sulphate of lime, it will effect a partial separation of the acid from the lime. We might infer from this, what is in fact the case, that if we saturate sulphuric acid with ammonia, and add as much lime as would have saturated it, the lime and ammonia divide the acid between them as long as the ammonia remains in the liquid state.

Quantity will compensate for superior affinity. Thus a large quantity of lime will entirely separate the ammonia from sulphate of ammonia; and the converse is true that a certain quantity of ammonia will separate lime from its combination with sulphuric acid. Other circumstances modify chemical decomposition and recomposition, as volatility, insolubility, &c.

Chemistry is intimately connected with agriculture; and farmers would find it greatly for their interest to acquire a knowledge of this science sufficient to understand the chemical changes that are continually going on in the materials upon which they operate. The loss arising from ignorance of these changes, or neglect to take advantage of them, is very great even in one agricultural district, or on one farm. Plants contain from one to two per cent of nitrogen, and this nitrogen can be assimilated only when presented in the form of ammonia. This must be supplied from some source, or the plant will not grow. Liebig informs us that one pound of ammonia will supply nitrogen for 60 pounds of corn or 80 pounds of hay. Yet a majority of our farmers allow a considerable part, sometimes nearly the whole of the ammonia in their barn and stable manures, to evaporate in the air or sink into the earth where it can do them no good. Floors where cattle stand, are often badly constructed—a sufficiency of straw or other matter is not used to absorb liquids; and the manure is thrown in a heap in the open air, where the sun, rains and frost, drive off so much of its ammonia and other fertilizing principles that it is materially lessened in value. Experienced farmers assert that when manure is exposed to the weather through the season, it loses one-fifth of its first value. If this is true, and there can be little doubt of it, the increased value of the manure in one season would be equal in many places to the cost of a shed for covering it. Another source of loss, proceeds from allowing it to ferment or *heat* to such a degree as to decompose or volatalize a large portion of the most essential ingredients. If gypsum was properly applied, it would fix the ammonia so that *that* could not be volatilized by the strongest fermentation.

Many farmers imagine that sand or loam mixed with stable manure, increases its value as much as peat or other vegetable matters; this is an error. Sand or loam is beneficial only by preventing too active fermentation and by absorbing a portion of the volatile and soluble ingredients. While peat or other vegetable matter has all these beneficial qualities, and at the same time increases the quantity of manure by its own fermentation.

Farmers in general, truly appreciate the value of *ashes* as a manure. Yet many are not aware that if ashes (earthy salts,) are not supplied to cultivated soil in proportion as they are taken from it in vegetable product, the soil will become in time unproductive and exhausted, though an abundance of carbon and nitrogen were supplied to it. These remarks are intended principally to convey an idea of the benefit which many would receive from a knowledge of the *Chemistry* of Agriculture.

Yours truly, E. MANLEY.

Easton, Mass. Dec. 21, 1842.

POUDRETTE AS A MANURE.

MESSRS. EDITORS—A few facts, the result of practical experience, in relation to this article as a fertilizer, may be interesting to some of the numerous readers of the Cultivator. If the editors think them worth the space they will occupy, they are at their service, and their insertion will much oblige the writer.

Extract from a letter of Mr. Ed. Fullager of Devoe's Point, Westchester co. N. Y. He says:—"I have seen its good effects on flowers and hot house plants, but more particularly on melons. I planted water melons in rather poor gravelly soil in 1841, by digging holes 18 inches in diameter, and put one quart of poudrette in each hill, well mixed with the earth; when the plants came up, I put another pint to each hill, and spread it over about three feet diameter, hoeing it well in. The vines grew vigorously, and on a space of three square rods of ground, I gathered 63 melons, weighing from 30 to 40 lbs. each. I gave my neighbor some of the same seed, who planted it, by mixing a shovel full of good yard manure to each hill—the soil being the same as mine—and the largest melon raised by him, did not weigh over 18 lbs. When he discovered the difference, and the *cause*, he made up his mind to take a share of stock in your company, which he did, and is well satisfied with his bargain."

Extract of a letter from Mr. Edward Condict of Morristown, N. J. He says:—"In 1841, I planted a field of corn, on about one-third part of which I used poudrette, a small handful, rather less than a gill to the hill. The other part of the field was manured with good barn yard manure, a shovel full to the hill; the corn was planted about the 10th of May, and by the 20th of June, when the corn was dressed out the second time, the part where the poudrette was used, was more than as large again as on the other part of the field; it also ripened a week or ten days earlier than the other. There was no perceptible difference in the yield. I also used it with good effect on buckwheat, potatoes, and turneps: particularly the latter. In order to ascertain its effects on turneps, I sowed a strip in the middle of the piece, mixing the seed and poudrette together, sowing it broadcast; the effect was very perceptible; the turneps were *larger* and fairer, and were not disturbed by grasshoppers, or any other insect. The soil on which it was used was light, inclined to sand, or gravel. Early in October, 1841, I used poudrette on a loamy soil, somewhat inclining to clay, which I had prepared for wheat; on about one-fourth part of it, after the wheat was sown, poudrette, at the rate of 20 bushels to the acre, was sown broadcast, and the result on harvesting, that part where the poudrette was put is much the heaviest grain, and but very little injured by rust or mildew, while the *other* part of the field is considerably injured. I am so well pleased with the poudrette, that I shall in future discontinue the use of barnyard manure in the hill for corn."

Other extracts might be given from letters written by gentlemen residing on Long Island, in Connecticut, and other states, but the foregoing may be sufficient to induce many others to desire to test its fertilizing properties, when they know where and how it may be obtained. Will you therefore allow me to say that it can be had in any quantity, at the rate of $5.00 for three barrels, or $15.00 for ten barrels, delivered on board of vessel in this city. Orders enclosing the cash, to be addressed to

D. K. MINOR, 118 Nassau st.

New-York, Jan. 25, 1842.

IMPORTATION OF WOOL.

MESSRS. EDITORS—In your Cultivator for January, p. 17, there is an article by Mr. S. W. Jewett, on the importation of coarse wool, &c.

The table given by Mr. J. of amount of such wool imported, I shall admit to be correct; but I think the general tenor of his deduction from the fact is erroneous. Mr. J. supposes, that if such a duty were levied on this wool as would prevent its importation, our wool growers would have to supply our manufacturers with an equal quantity of domestic growth. Were there a probability of such a result, I would warmly advocate a prohibitory duty; but if such a duty should destroy all those manufacturers now engaged in its consumption, and with it the consumption of five millions of pounds of the lower qualities of American wool, then I think such a policy would be suicidal. Having some knowledge on this subject, I will endeavor to show our farmers how destructive to their interest would be the measure suggested by Mr. Jewett.

I have been directly and indirectly engaged in the woolen manufacture of this country for more than thirty-two years, and have promoted that interest as far as laid in my power; how effectively, I shall leave those engaged in that branch to decide.

The consumption of low priced foreign wool is mostly confined to carpets, crumb cloths, baizes, Kentucky janes, coarse blankets, satinets, &c. In working up such goods, the warps, with the exception of janes and satinets, are made of American wool, fully equal to one-third, and the filling of foreign wool. These goods have fallen fully fifty per cent since our manufactures have competed with the foreign, and very many of our manufacturers have already fallen under the competition; the best of them can now barely make a living by their business, and a duty of four cents per pound would ruin them in toto. Before the coarse wool was imported duty free, most of the goods now made from it were imported, and our citizens will have again to depend on importation, if a protective duty be levied.

By the destruction of this branch of manufacture, one hundred thousand families would lose their support, and be compelled to resort to agriculture for a living; instead of being consumers they would become producers. Our sarmers would thereby lose a market for five millions of pounds of American wool, and our shipping interest would lose foreign freight to the amount of fifteen thousand tons per annum. WM. PARTRIDGE.

DOMESTIC FOWLS.

MESSRS. EDITORS—A subscriber in your last September number, wishes to know where some Dorking fowls can be found; and another in your October number inquires for Poland fowls. I would state in reply, that I have a few of the Dorking breed, but can spare none this year. Of the pure blooded Poland breed, I have about three dozen, and can spare a part if they are wanted. Though I have for some years been somewhat of an amateur in breeding and experimenting upon fowls, yet I never thought of breeding them to sell. But an article of mine in your June number of last year, signed H. A. P. occasioned some communications to be sent to our Post Master, requesting him to ascertain the writer of the article, and a request for me to send some Poland fowls to different parts of the country, which I have done agreeably to request. That the P. M. may be no more troubled by such communications, I now give my name and residence. The price of my Poland fowls will be $1 each, or six for $5, put up in a suitable coop and delivered on board of any vessel or boat sailing from this city. Any orders from abroad may be supplied on the first opening of navigation in the spring.

Of the qualities of the Dorking breed, I cannot speak from experience; but shall endeavor to test them during the coming year. Nearly all the other varieties known in our country, I have tried, but have found nothing comparable yet to the Poland, either for beauty or profit.

Buffalo, N. Y. Feb. 15, 1843. H. A. PARSONS.

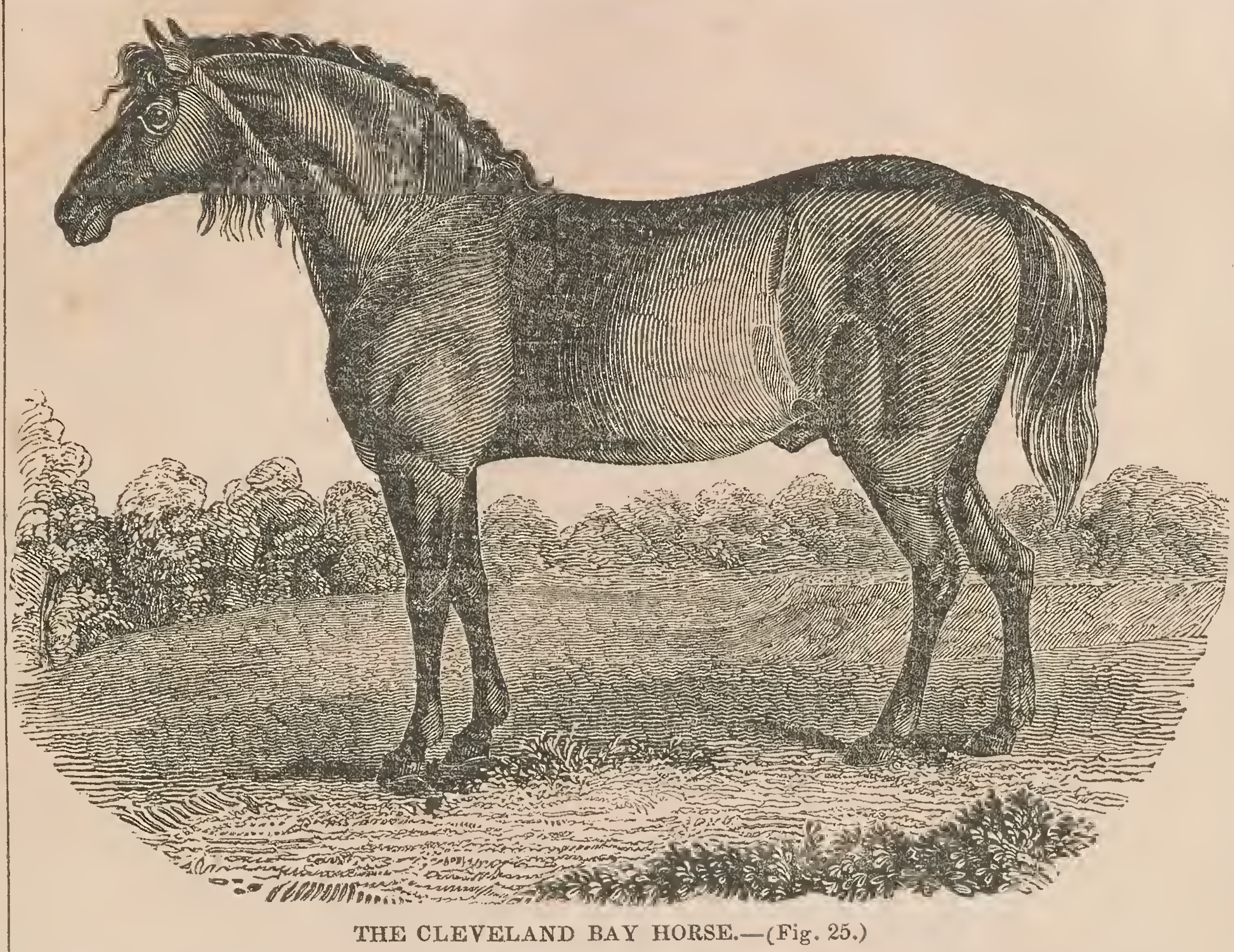
WATER FOR STOCK.

MESSRS. EDITORS—Having, for many years been in the practice of leading my horses a considerable distance to water, I began to cast about, for some method of supplying this indispensable article, with less inconvenience. There being no running water, or spring, that could be conducted to the premises, without great expense, I resolved to dig a well, in a corner of the barn yard. The work was completed in less than three days; a sweep then erected, and now, instead of the distance formerly gone over, I have a good watering place, within two rods of my barn. Had this been done, when the barn was built, more than 1,500 miles travel would have been saved. I hope, Messrs. Editors, that none of your numerous readers, who may be similarly located, have been thus negligent, or irresolute, as myself; but if there be a solitary case like mine, let me just say to that individual, *resolve to have a well* near your barn; and, almost before you are aware of it, the work is done.

Clinton, N. Y. Feb. 1843. G. BUTLER.

THE CLEVELAND BAY.

THE annexed figure (25,) is a portrait of a Cleveland Bay stallion, copied from Low's Illustrations. This breed of horses, says Prof. Low, "has been formed by the progressive mixture of the blood of horses of higher breeding, with those of the common race. It is termed Bay, from the prevailing color, derived from approximation to the superior races, and Cleveland, from the fertile district of that name situated in the North Riding of Yorkshire on the Tees. About the middle of last century, this district became known for the breeding of a superior class of powerful horses, which, with the gradual disuse of the heavy old Coach Horse, became in request for coaches, chariots, and like carriages. The breed, however, is not now confined to the district of Cleveland, but is cultivated thro'-out all the great breeding district of this part of England, although Cleveland yet preserves its pre-eminence, and supplies with stallions the parts of the kingdom where superior Coach Horses are reared.



THE CLEVELAND BAY HORSE.—(Fig. 25.)

"The true Cleveland Bay may be justly termed a breed, from the similitude of characters presented by the individuals of the stock. It has been formed by the same means as the Hunter, namely, by the progressive mixture of the blood of the Race Horse with the original breeds of the country. But a larger kind of horse has been used as the basis, and a larger standard adopted by the breeder. By coupling a Race Horse with a Draught Mare, an animal will be produced partaking of the properties of both parents, and which may be employed as a Coach Horse. But the results, as was before observed, of such a mixture are uncertain, and the progeny will probably be wanting in just proportion of parts. Many Carriage Horses are doubtless produced in this manner, but many of them, if their history were told, have been found to be worthless. To rear this class of Horses, the same principles of breeding should be applied as to the rearing of the Race Horse himself. A class of mares, as well as of stallions, should be used having the properties sought for. It is in this way only, that we can form and perpetuate a true breed in which the properties of the parents shall be reproduced in their descendants. The district of Cleveland doubtless owed the superiority which it continued to maintain in the production of this beautiful race of horses to the possession of a definite breed, formed not by accidental mixture but by continued cultivation."

FARMERS, SOW GRASS SEED.

MESSRS. GAYLORD & TUCKER—This important branch of farming has been too much neglected by most of our farmers. The almost total neglect to sow grass seed upon our lands, has caused them to run down at so low a rate, that few cattle could be kept, and consequently the fertility of our lands has rapidly diminished. The free use of clover and plaster, has raised many poor, worn out farms, and that too, at a cheaper rate than by the use of stable and other manures. It has been remarked by many farmers, that if they can once get clover to grow on their lands, then they can raise any other crop; and this we firmly believe. Many farmers, when they sow clover seed, sift it out as though they were sowing "gold dust," with the thumb and finger. Old farmers used to say, that when you sowed your turnep field, you must leave your seed at home; but this "old maxim" will not hold good with regard to sowing grass seed. A certain farmer has remarked, that when we sow grass seed, instead of sifting it out with the thumb and finger, it should be sown out of the tail end of the cart, with a shovel. The idea to be conveyed is, that it should be sown with a liberal hand, and of this fact, every farmer must be convinced on trial; as when it is sown thinly, the plants come up scattering, and in nine cases out of ten, the weeds will overrun the whole. There is a difference of opinion among farmers, with regard to the best time for sowing grass seed; however, we would recommend sowing in the spring, with your oat and barley crops; and in the summer, with your buckwheat crop; and also, in the fall with your rye and wheat crops. Sowing in this way, we shall be likely to hit right, either at one time or another, as the case may be; always recollecting, that when we leave a piece of ground, at any season of the year, to put on the seed, and especially clover seed. It is a very good time to sow clover, on winter grain in March, on a light snow, as we have found that it takes very well, when sown at that time. L. DURAND.

Derby, Conn. Jan. 31 1843.

WATER POWER CHURN

EDITORS OF THE CULTIVATOR—I have but just read the inquiry asking of me a description of a wheel, connected with the power churn described at p. 167, vol. 9. There are two kinds of wheels that may be used, both of which are economical. The common saw mill or flutter wheel, and the tight bucket wheel. Where the stream is large, and the supply of water abundant at all times, the flutter wheel would be preferred, as the cost of its construction is less, and no geering is required; but when the stream is small, or in the dry season becomes very low, the tight bucket wheel should be used. Where there would be a fall of two and a half feet, should it be necessary to use the last mentioned kind of wheel, make it two feet in diameter, three feet wide, with a rim two and a half inches deep; the buckets should be about two and a half inches apart, and put in with such an inclination to the lining as would prevent the water from emptying out too soon, which I should think would be something less than 45°. There will be wanted, for a shaft to a wheel of the above dimensions, one four feet long and one foot square, (or make it eight sided if you please,) with an iron rod running through it, and extending two or three inches beyond on each side, as a gudgeon, which will prevent it ever working loose. Four arms will be sufficient for each rim, which in that case will be made of quarters, and care should be taken to have them (the rims,) as little cross grained as possible. A wheel of this size, when running at proper speed, (which philosophy dictates should be slow to get the greatest amount of benefit from a given quantity of water,) will require gearing to give the proper motion to the churn dash. The casting that will be required, will be a cog rim about the size of the rim of the wheel, to be attached to it, and a cog wheel of a foot in diameter, so cast as to have a nob near the rim on one of the spokes, to attach the upright to the horizontal of the frame work of the wires. The rise and fall of the dash will be affected at three places in the construction. First, the distance the nob is from the center of the cast iron wheel; next, by the length of the horizontal of the frame work at the stream, and by the corresponding horizontal of the frame work at the house. This last may be perforated with holes, that will serve to increase or lessen the motion, as required. The reason that I do not give the length of the different parts of the frame work, is because I have forgotten the proportions of the one of which I superintended the construction. Select large sized wire. To the other part of the inquiry, I would answer that a considerable elevation or depression would not hinder its operation, and that it will work at a much greater distance than 160 yards. Pulleys, by all means, should be used. I forgot to mention that if a flutter wheel is used, the crank is attached to the end of the gudgeon.

Waterford, Oakland co. Mich. Dec. 1842. G. COOK.

WILD TURKIES.

MESSRS. EDITORS—Ever since Gen. La Fayette was in this country, and expressed a wish to obtain some wild turkies to take with him to France, I have felt an interest in this kind of poultry. When I came to this state in 1835, I made up my mind that I would endeavour to obtain and domesticate some of them as soon as I could. Upon inquiry, I learned that occasionally a nest of eggs was found and put under hens to be hatched out, and the young ones killed in the following winter, under an apprehension that they would run off in the spring. In 1837, a nest of eight eggs was found, which I purchased. These I set under a hen, and all were hatched out. A difficulty now occurred. The young turkies paid no attention to the hen's cluck—were disposed to wander about, and make the hen follow them, instead of their following the hen. In this way, they were in danger of being lost, and some of them were lost in consequence of going further from the house than the hen was disposed to follow. Of the eight, I succeeding in raising but one, though I believe none of them died a natural death. This one kept company with the hens, and roosted with them, till by repeated alarms from vermin, he forsook the hen house and took the roof of a stable for a roosting place. This proved to be a cock, but it was not till he was more than eighteen months old that he began to strut and gobble. In a very windy time, he would leave his roosting place, and go into the hazle bushes which were near by, to lodge. On one of these occasions he was killed, probably by a prairie wolf, as they were plenty in the neighborhood. This turkey was so thoroughly domesticated, that he would eat corn out of my hand, and showed no more disposition to wander off than my hens.

The last year a wild turkey's nest was found in the neighborhood, and I obtained seven of the eggs and set them under a hen. Six of them hatched, and I made a yard on a grass plat for them, by setting up boards edgeways, in a square form, and one tier high, where I kept them confined till they became attached to the hen, and then let them run at large. I took some pains to have them run in the garden to keep the vines clear from bugs, which they did effectually, without doing any damage to the vegetables. My place, as I keep no dogs for the protection of poultry, is beset with what our sucker folks call the *wild varmints*, such as weasels, skunks, minks, racoons, and prairie wolves, so that I succeeded in raising but three out of the six. These I valued very highly, and thought them out of danger, when a hunter came along and seeing them a little distance from the house, shot two of them, so that my stock is reduced to one solitary hen.

My own experiments in rearing wild turkies, go no further, but I know of the results of the experiments of persons of my acquaintance in this county, some of which I will give. A family in a small grove, had a pair of wild turkeys; the hen when a year old, laid a nest of eggs, but none of them hatched; a season after this she raised a litter of young ones, which after getting their growth, with the old ones in company, left the grove, and never returned. Another family had a pair; the hen got accidentally killed when about a year old, and the gobbler kept company and roosted with the fowls. The next spring the owner procured two tame hen turkeys, and succeeded in raising 28 half bloods. A neighbor had a wild gobbler domesticated, one year old, and two tame hen turkeys. That season not an egg hatched; the next season, from one of the hens, the other having died, he raised fourteen or fifteen half bloods. The gobblers (unlike the tame in that respect,) it seems do not come to maturity till they are two years old. The half blooded turkeys bear a greater resemblance to the wild than they do to the tame, and will breed equally well.

Although my attempts at rearing wild turkeys have been so unsuccessful, I am not discouraged, but intend to persevere in the effort a while longer; I believe that it will be some little object to raise the full and half bloods here, but much more of an object to raise them in your neighborhood, for the city market. The reason why they would have a preference over the tame turkey, is, 1st. That they are larger; one was killed about ten miles from me, which weighed 24 pounds; and I have heard of their being killed in Ohio, one at least, which weighed rising 30 pounds. 2d. They are more robust, will bear the rain and wet grass, and therefore more easily raised than the common turkey. 3d. They are hunters of flies, bugs, and other insects, and eat much less corn or meal than other poultry, and of course more profitable.

They are a more beautiful fowl than the tame turkey. Their color being brown or snuff, with feathers having a lustre or brilliancy upon them, in some degree like the peacock. There are at present, within five miles of me, five full blooded wild turkies. If the gobblers were in your part of the country, I should think them better worth $50 a piece, to run with a flock of tame hens, than some imported animals are worth the prices they have brought.

Rockvale, Ill. Jan. 28, 1843. S.

CULTURE OF INDIAN CORN IN OHIO.

Messrs. Gaylord & Tucker—I wish to make a few remarks on the culture of Indian Corn, and also the importance of improving the seed. Sometime in March last, while in conversation with several of my neighbors on the subject of Agriculture, and the importance of forming an Agricultural Society in our county, one of them bantered me to compete with him for five dollars on the best acre of corn, without manure; agreed, said I, but I would prefer manuring. He objected, no doubt supposing he had the strongest land. What kind of seed will you plant, said he. The yellow, the same I had planted for many years. Perhaps it is better than mine, said he. If so, I'll profit by it. Where did you get it, said he. I made it. Will you furnish me with seed to plant my acre? I answered in the negative. Why not? It would not be a fair way to test our skill in agriculture.

One of my fields included a part of a pond, the soil of which was a deposite of decomposed vegetable matter, but was considered worthless by many, in consequence of stagnant water that covered it three-fourths of the year. I cut a ditch lengthwise of the pond, and drawed off the surface water, and then laid off the field in lands precisely two rods wide, crosswise of the main ditch, broke up the lands as deep as I could, harrowed well, let it lie two weeks; plowed again precisely as before, taking care both times, to throw out as much dirt as possible, with the finishing furrows, and where the plow failed to throw the dirt out deep enough, I used the hoe; that left the field throwed up into beds two rods wide, separated by ditches about fourteen inches deep, running across the main ditch; harrowed lengthwise of lands, laid off eight furrows to each land, lengthwise of course, which made the rows precisely four feet wide, except the eighth row, which was five feet of course, and came at the ditch; so every eighth row covered the ditch, and being five feet wide, gave a free circulation of air, a very essential thing with our large varieties of corn. I then laid the ground off in lands five rods wide the other way, and there left open spaces also for the air to circulate at right angles with the rows. Planted in drills, middle of April, one stalk in a hill, from ten to twelve inches apart. As soon as the corn made its appearance, went through it with a very narrow toothed cultivator, close to the corn; then raked through the hills with a pronged hoe, with four prongs, similar to the tines of a pitch fork. This left the earth as mellow as ashes, about the corn. Seven days after first cultivating, passed the cultivator through again; then hoed as before and thinned; next week, cultivator again; next week run the shovel plow as deep as possible; next week, cultivator; next week, run the shovel plow as deep as before; ten days after, passed the cultivator for the last time, taking care to hold up the side next the row, to prevent injuring the lateral roots. The corn was then from 8 to 10 feet high, and of the most luxuriant growth I ever saw. On the 19th of July, we had a tremendous hail storm; it prostrated nearly all the corn for miles up and down the river; the oats and grass that was not cut, as well as the corn, presented the appearance of a field that had just been rolled all one way. My corn was then 12 feet high, and not one stalk out of 100, showed its tassels; a great deal of it was broken off, and still more turned out by the roots, and a great deal that was bent down, was too heavy to rise, and rotted in piles.

In October, I wrote a few lines to my competitor, stating that our corn was ripe, and it was time to appoint a committee to measure the corn and ground; or if he preferred, we would lay it over till next year, 1843, and try it over again. He wrote back, he would prefer laying it over.

Now what I want is, for some one to inform me how to improve on my manner of cultivation. Would I have made more corn, had I quit working when the corn was 3 feet high? Did I plant it too thick or too thin? Were those wide spaces or ventilators, beneficial or detrimental?

Had I not abundant testimony to prove the following statements, I never would publish them, knowing how hard it is to make people believe we can raise more corn now, than our fathers could forty years ago. Roman Minage, an excellent farmer of Mercer's Bottom, Mason co., Va., heard of my corn, and came down 20 miles to see it. He went into the middle of the field, laid down a rod pole by the row, gathered and shelled in a half bushel the length of pole, carried to house, measured half bushel with square, found it to be three-fourths full, shook down measure; after reserving one stalk that I would not have. shelled, it producing five good sound ears, measuring four feet, save one inch, running measure. Shelled the five ears this day; product three pints corn perfectly kiln dried, and numbered 3,940 grains; product of one grain. The rod measured, had but one stalk broken down. I measured one-fourth of a square rod at a different part of the field, that gave at the rate of 233 bushels to the acre. We measured a square rod at the side of the field, on ground that has been under cultivation 20 years, without manure, but laid idle four or five years, had obtained a good sward, yield one bushel and ten quarts, or 210 bushels to the acre; 17 stalks broken down. I have been persuaded in my own mind for a number of years, that my corn would yield an average of one pint to the stalk, provided the ground was in the highest state of cultivation. I will give an extract of a calculation I made a year ago, viz: Corn planted four feet one way and one the other, makes 68 stalks to square rod; if they produce one pint each, will be 170 bushels per acre; 4 feet by 10 inches makes 82 stalks per rod, 204 bushels per acre; 4 feet by 8 inches makes 102 stalks per rod, product 255 bushels per acre. I have realized what I layed it at when planting, where it was not injured by the storm. H. N. Gillet.

Evergreens Farm, Lawrence co., O., Jan. 23,1843.

N. B. I meant to have said something on the subject of improving seed corn, but time and space fails.

Veterinary Department.

DISEASE OF THE SKIN OF CATTLE.

"Messrs. Editors—About three months since, I noticed that some of my cattle had lost or rubbed the hair off around their eyes; and ever since, it has been spreading from the youngest to the oldest. Some have spots under their ears; and the skin looks scabby or scaley, something like a large seed wart of a whitish color; some are bare on their legs, and others on their forehead. There does not appear to be any itching, at least I have never seen them rubbing the part affected. If you know any thing respecting the disease, and can prescribe a cure, you will much oblige, Yours, &c. W. L."

The disease spoken of by our correspondent, belongs to that class of affections of the skin, usually called the mange, by veterinarians, or that kind of it known as the *angle berry*, from its frequently assuming a warty appearance, in addition to the usual scurfiness of the skin, characteristic of mange. The cause does not appear to be well understood, as the disease occasionally shows itself at all seasons of the year, though most frequently in the fall and winter months. Checked perspiration probably has its influence, and all those causes that produce scurfiness,or a bad condition of the skin, doubtless contribute to the result. Simple mange, or when the skin is scurfy, the hair comes off in spots and there is much itching, is frequently cured by rubbing in common sulphur ointment, made of sulphur and lard. In more advanced stages, when the skin is cracked, &c., an ointment prepared of 1 lb. sulphur, 4 ounces common turpentine, 2 ounces mercurial ointment, (unguentum,) and linseed oil one pint, will cure. The oil must be warmed, and the turpentine melted in it; then partially cooled and the sulphur stirred in, and when cool, the mercurial ointment is added, and well rubbed together with the other ingredients. This preparation rubbed in on the places affected, by the hand, will speedily check the disease. When there is little itching, but a tendency to form a warty surface, camphorated oil is a good remedy; and will generally effect a cure, if carefully rubbed over the scabby parts of the skin. A few applications of spirits of turpentine, will also, in most cases, remove the disease completely. If warts appear on parts where they are troublesome to the animals, they may be cut off with a silk or india rubber thread, drawn tight around the smallest part; or it may be cut off at once with a knife, and the part cauterized or touched with a hot iron, to prevent bleeding. Mange, in all its forms, is doubtless infectious, and the separation of diseased from healthy animals, should always be practiced. If animals were occasionally fed with a small quantity of sulphur mixed with their food, diseases of the skin would be much less frequent; and as in all such cases of disease, there is more or less derangement of the system, it is advisable to give doses of sulphur to the beast, while making the external applications for the cure. In the treatment of all diseases of the skin, it should be remembered that the earlier the disease is met, the easier is the cure; and that cleanliness is one of the best and surest preventives in all cases of the kind.

"HOLLOW HORN"—"HORN DISTEMPER," &c.

Messrs. Gaylord & Tucker—There is no subject connected with husbandry, on which light is more needed, than on the treatment of diseases of domestic animals. Many die annually from neglect and inattention, and many more from improper management of their diseases. If an animal is sick, and it is thought advisable to make an attempt to cure him, the course frequently taken is to give him all the nostrums of all the bystanders, each prescription being a "perfect cure," though in its nature and composition as opposite to all the rest as are the poles to each other, and though, perhaps, not one of the advisers has any correct idea of the disorder. I have often been amused at the various specimens of quackery which farmers will suffer to be played off upon them by ignorant cow leeches. Take for instance, many of the thousand prescriptions for curing a disease in cattle, called "horn ail," "hollow horn," &c. Some "certain cure," or prevention for this disease, is almost every day being brought before the public. I have just taken up a paper in which some "down east" empiric declares that cutting off a part of the tail, and splitting several inches of the remainder, and "tying a piece of onion into it, will effectually cure the horn ail." Sometimes it is said that "painting the horns, or covering them with a coat of pitch or tar," or "putting spirits of turpentine or tar on the top of the head, and round the roots of the horns, is an infallible prevention."

All such prescriptions, indicate an ignorance of the pathology of the disease to which they refer.

I have no doubt that the disease to which the name of "hollow horn," &c. has been given, (though perhaps improperly,) is a somewhat formidable one, and that it is the *remote*, if not the immediate cause of the death of many cattle annually. It is obvious, that before the most proper treatment of a disease can be pursued, its nature and causes must be fully understood. There is very little information of this kind, in such specifics as are quoted above. What, then, it may be asked, is the nature of the disease under consideration? I answer, an inflammation of the membrane which lines the nostrils, and the sinuses, or cavities of the head and horns. This inflammation sometimes extends itself even to the brain, producing vertigo, &c. and in the more advanced stages of the disease, the whole system becomes more or less deranged, the digestive organs lose their tone, the heart and lungs become affected, and death ensues.

The predisposing causes of this disease, are weakness and debility; frequently produced by poor keeping, and exposure beyond what the animal can endure. In this state of feebleness, the animal is predisposed to disease of every kind; because it has not the constitutional vigor necessary to resist attacks, and bear up under difficulties, and they seize on the system and break it down. Suppose, then, that an animal in the debilitated condition just described, should be exposed to a cold storm, what might reasonably be expected as the consequence? Why, in common parlance, *a bad cold.* The effects would be analagous to those which are seen and felt in the human species from the same cause. The membrane which lines the nostrils, is inflamed, the nostrils appear to be stopped up, and sometimes a violent pain is felt extending up the internal part of the nose, and over the eye. This shows that the membrane which lines the sinuses, is inflamed throughout the extent to which pain is felt.

These sinuses, or cavities, are common to several species of animals. In cattle there is a continuation of them from the nose almost to the tips of the horns, and in fact, nearly round the upper part of the head. But it is not necessary that an animal should have horns, to have the "*horn distemper;*" for the same disease is seen in hornless cattle, and even man, as has been before stated, is simarly affected.

If these premises are correct, what is the proper treat of "horn distemper?" Anything that will allay inflammation. Bleeding, physicing, together with proper sheltering and feeding. "Cutting off the tail," as some blood would follow, would be likely to do some good; but a better course would be to bleed at the jugular vein, and to regulate the quantity of blood taken, by the degree of fever in the subject. Boring the horns is advisable, for if matter has collected, letting it off, will afford relief. But if the disorder is much advanced, and the viscera affected, boring the horns, or syringing them, will do but little, without other aids, towards effecting a cure. Besides, this "grand specific" cannot be resorted to, in cases where the beast has no horns.

As to the kind of medicines, it may be remarked, that the more simple they are in their nature, the better. In all cases of constipation, the simplest cathartics are to be preferred. Castor oil, or glauber salts and molasses, in from five to eight times the quantity usually given to man, will, if taken in season, be generally found sufficiently effective.

It may be observed here, that I have never seen what we call "horn distemper," "horn ail," or "hollow horn," described by any of these names, in English work;. .It is briefly noticed in that part of Youatt's work entitled the "Anatomical structure and diseases of Cattle," under the head of "Inflammation of the Frontal Sinuses." [See p. 275, 276.) Sanford Howard.

Zanesville, O., Feb. 1, 1843.

CURE FOR WEAK LOINS IN SWINE, &c.

Messrs. Editors—At page 168, of vol. VII, of the Cultivator, there is an inquiry of J. M. Hudson, of Waylandsburg, (Va.) relative to a disease among swine, described as a weakness of the loins, and inability to rise on the hind legs. This is a disease quite common in this country, and in a residence of ten years here, there has not been a year but some of my swine have had this disease, and yet I have lost but few, none I believe, when the proposed remedy was applied in time.

The remedy I use, is to immediately bleed, by cutting off the tail, and to rub freely tar or spirits of turpentine on the loins, and give them internally, soap or soap suds, which they will drink freely.

I have just butchered my swine, and among the rest, have butchered one which a few months ago was unable to walk, but by using the above remedies was cured, and was as fat as any one in my pen.

Cure for Scours and Colic in Horses.—I would also give a remedy which I have often tried with success, for the scours in horses, or sucking colts. A pint of strong coffee, moderately warm, with two or three eggs broken in it, and one gill of flour, all stirred together, and given inwardly by drenching. If the first dose does not effect a cure, it may safely be repeated.

If the above is applied in time, I have never known it fail to produce a speedy cure. Sometime since, I had a fine young horse taken with the colic, and after trying all the remedies usually given in such cases, all those present gave him up for lost; but upon giving him about half an ounce of laudanum, in less than ten minutes he appeared perfectly easy, and got perfectly well. John M. Johnson.

Hannibal, Mo., Dec. 28, 1842.

The British American Cultivator says "that a strong wash made of pearlash and water, applied thrice a day, will remove tumors and warts."

"The poorest of all family goods are indolent females."

The Garden and the Orchard.

THE FLOWER GARDEN.

It has been remarked, that there is hardly a specimen of the modern style of gardening in America, which a European would consider as neatly kept. But neatness obtained at very extravagant expense, can hardly be considered desirable. It is true, that gravel walks, rolled as smooth as a floor; turf, kept by constant shaving, as even as a carpet; flowering plants visible only when in full bloom, by the use of a reserve garden; profuse masses of rare green house plants, occupying open beds during summer;—all these may indeed produce a scene of great brilliancy and beauty, but the employment of half a dozen gardeners for a single acre, with a scientific superintendent, hardly accords with the republican simplicity which should always govern us. What therefore we have to retrench in labor and money, we should expend in study and thought, and much may still be accomplished. We should adopt the motto of Downing, "Profuse in genius, not profuse with gold."

Figure 26, is an isometrical view of a flower garden, laid out in the modern style; which admits of almost an infinitely greater variety, and a much more extensive field for the exercise of the invention, than the geometrical style. At the same time, the desired effect is obtained at less expense. The size of this plan may be varied from a quarter of an acre to two acres or more. The ground allotted, is surrounded with a close plantation of shrubbery and trees, so as to shut out the distant view, except where portions of the surrounding scenery may occasionally be left visible, to add to the expression of the whole. The intermediate space is a smoothly shaven green, near the outskirts of which, there is a gracefully bending gravel walk, bordered by circular, arabesque, and other flower beds. Handsome shrubs and small trees, may be occasionally planted in small groups, so as to interrupt, but not entirely break the view, which will add to the variety and apparent extent of the grounds.

In laying out the curves of the gravel walk, a very convenient method is to provide a number of small sticks, and insert them in the ground at regular distances, varying each, successively, an inch from the straight line. They will thus form a very regular curve; and a short curve may be made to pass gradually into a longer, by gradually increasing the distance of those sticks.

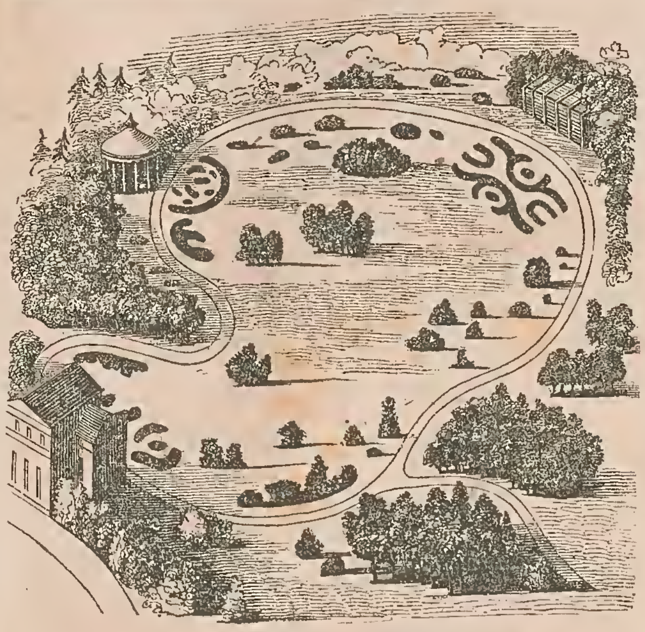
As a general rule, no part of the walk should be seen; except that directly before us; the distant portions are concealed by flower beds, shrubs, or intervening higher ground, as the case requires.

Circular and elliptical flower beds are made, and the boundary kept with precision, more easily than any others with a curved outline; hence they are largely introduced in the accompanying plan. They should have the tallest plants in the center, and those of successively decreasing height towards the circumference. They may be of mixed flowers of various colors, planted hexagonally; or in concentric circles, or belts; or in masses of one color. A portion of each of these kinds of flower beds, tastefully intermixed, would add to the variety of the garden. Flowers arranged in a bed by intermixing opposite colors, give an expression of *brilliancy;* while those of similar colors, varying only in shade, arranged in belts or masses, are distinguished for *richness* of appearance.

To enable the cultivator of flowers to arrange them to advantage, requires an intimate knowledge of the plants, their height, color, and season of flowering, which can be properly attained only by experience. The experience of others, however, often affords essential aid; and to contribute to this end, a list of some handsome flowering plants, most of which are easily obtained either in our forests, nurseries, or private gardens, and the times at which they flower in Western New-York, are here given. The time will of course be influenced by the season, by the fertility of the soil, and by the situation. This list is nearly the average of several years observation of plants in the open air, remote from shelter. The earliest continue generally only a few days; those later, often extend through two or three months; where the latter is the case, their first appearance is noted. They are nearly all perennial rooted, a few are biennial. The numbers designate the height, which will of course vary with the cultivation; those marked 1, are lowest, being only a few inches high, and are mostly adapted to edging; those marked 4, are more than two feet high; the others are intermediate. Nearly all are acknowledged to be decidedly handsome, and some very splendid.

Flowering early part of 4th month.—April.

1. Galanthus nivalis, (snow drop,) white.
1. Crocus, white, purple, striped with purple, yellow, golden.
1. Eranthus hyemalis, yellow.
1. Viola tricolor, (pansy,) dark purple and yellow.
1. Hepatica triloba, white, pink, pale purple. Native, common.
1. Claytonia virginica, light red striped. Native, com'n.
1. Scilla siberica, (Syberian squill,) fine blue.
2. Iris persica, (Persian iris,) variegated, purple and yellow.
1. Primula veris, (Cowslip, &c.) many varieties and colors, yellow, orange, lilac, red, purple.
1. Bulbocodium vernum, pale red.
2. Hyacinthus orientalis, (hyacinth,) blue, red, pink, white.



Isometrical View of a Flower Garden.—(Fig. 26.)

Flowering latter part of 4th month.

2. Sanguinaria canadensis, (blood root,) white. Native, common.
2. Anemone thalictroides, white. Native.
2. Corydalis cucularia, white. Native, common.
2. Erythronium lanceolatum, (yellow.) Native, common. E. dens-canis, purple.
2. Collinsia verna, blue and white parti-color. Brilliant in masses.
1. Houstonia cærulea, light blue. Native.
2. Phlox stolonifera, red.
2. Narcissus, several species and varieties, white, yellowish white, and yellow.
2. Iris pumila, blue.
1. Viola odorata, (sweet violet,) blue.
3. Tulipa gesneriana, (tulip,) red, yellow, white, endlessly variegated.
3. Fritillaria impcrialis, (crown imperial,) reddish orange. F. meleagris, variegated.
1. Vinca minor, (periwinkle,) blue. Running stem.
1. Houstonia ciliolata, white.
2. Caltha palustris, yellow. Native, common.
3. Pulmonaria virginica, light blue. Native.

Early part of 5th month.—May.

3. Aquilegea canadensis, yellow and reddish orange. Native.
2. Phlox divaricata, white, shaded with blue and purple. Native.
1. Phlox subulata, (moss pink,) red. Very showy in masses.
1. Phlox setacea, red, white.
2. Vinca major, (large periwinkle,) blue. Running stem.
1. Primula auricula, (auricula,) purple, yellow, and red, combined.
3. Delphinium tricorne, blue.
2. Silene pennsylvanica, red.
2. Dodecathcon meadia, reddish purple, white.
3. Corydalis glauca, purple and yellow.
1. Statice armeria, light red.
3. Veronica spicata, blue.
3. Polemonium cœruleum, blue.
2. Convallaria majalis, (lilly of the valley,) white.

Latter part of 5th month— May.

2. Trillium grandiflorum, white. Native.
3. Aquilegea vulgaris, purple.
3. Veronica gentianoides, blue.
2. Geranium sanguineum, red.
3. Baptisia cœrulea, blue.
2. Trollius, europeus, yellow.
4. Iris, many species, several blue and purple, some yellow, mottled, white.
2. Amaryllus formosissima, dark crimson.
3. Plox ovata, pale red.
3. Pœonia teunifolia, crimson.
4. Pœonia albiflora, white;—var. *Whitleii,* pale pink;—var. *Humei,* rose;—var. *Fragrans,* red, all splendid.

Sixth month.—June.

3. Dictamnus fraxinella, white, reddish purple.
3. Plox maculata, fine red.
4. Hemerocallis flava, (day lily,) yellow.
2. Lupinus perennis, (lupin,) blue.
4. Lilium bulbiforum, (orange lily,) orange.
3. Pentstemon pubescens, light purple. Native.
3. Digitalis purpurea, purple.
4. Spirœa aruncus, white. S. filipendula, white.
4. Papaver orientale, orange red.
4. Papaver bracteatum, dark crimson, large, splendid.
3. Delphinium chinense, (Chinese larkspur,) blue.
4. Clematis erecta, white.
3. Campanula persicifolia, blue, white. Splendid in masses and mixed.
3. Lilium philadelphicum, orange. Native.
3. Lythrum salicaria, purple.
2. Campanula grandiflora, blue.
3. Orchis fimbriata, reddish purple. Native.
3. Cypripedium spectabile, light purple. C. pubescens, yellow. Native.
2. Corydalis formosa, red.
3. Aconitum napellus, blue.
4. Gladiolus communus, red purple.

Seventh month.—July.

3. Coreopsis lanceolata, yellow.
3. Spirœa ulmaria, white. S. lobata, red.
4. Lilium canadense, orange. Native.
4. ——— cadidum, white, (white lily.)
3. Chelone barbata, red orange.
4. Catananche cœrulea, blue.
2. Spigelia marilandica, red.
3. Spirœa lobata, red.
2. Campanula carpatica, blue.
4. Monarda didyma, scarlet. Native.
4. Phlox paniculata, light red.
4. Yucca flaccida, white.
4. Nuttalia digitata, purple.
4. Liatris spicata. L. scariosa, purple.
2. Lobelia cardinalis, brilliant scarlet. Native.
3. Campanula trachelium, blue.
4. Lathyrus latifolius, (perennial pea,) purple.

Eighth month.—August.

4. Ixia chinensis, orange.
3. Cassia chamœchrista, yellow.
4. Cassia marilandica, orange yellow.
3. Dracocephalum virginianum, red purple.
4. Lilium tigrinum, (tiger lily,) red orange.
3. Lobelia siphilitica, blue. Native, common.
3. Ageratum mexicanum, purple.
4. Epilobium spicatum, purple.

Ninth month.—September.

4. Hibiscus palustris, rose red.
4. Aster novæ-anglæ, blue purple, splendid in masses. Native.
2. Gentiana saponaria, blue. G. crinita, (fringed gen tian,) light blue. Native.
2. Gypsophila repens, white.
2. Eupatorium cœlestinum, purple.

By a proper alternation in the same bed, of those plants which flower successively, a constant bloom may be obtained through the season.

For the sake of economy, all the plants should be placed in regular rows in the beds, either in circles, hexagons, or squares. This arrangement admits of cleaning with a light hoe and rake, with one quarter of the labor of hand weeding. J. J. Thomas.

Macedon, 2d mo. 1843.

GOOD FRUIT.

Farmer, have you good fruit in your orchard? If not, remember that March is a good month to cut cions, prepare wax for grafting, and make preparations to secure a supply of good fruit for the future. In operating on large trees, it is a very good plan to cut or prune off some of the largest branches, always leaving a few to shade the trunk of the tree, with such branches as will be wanted to form a good head to the same. From these will spring thrifty vigorous shoots, which may be grafted or inoculated with little danger of failure, which will not always be the case, where grafts are set on large branches. Pruning may be performed in March, although we prefer to have it done in July, for the reason that the wounds made will be sooner covered, and long exposure to the weather prevented. It is a common, but a bad practice, to prune trees only at intervals of many years. This renders it necessary to divide large branches, and such wounds before they are healed over, are apt to leave decayed places, fatal to the health of the tree. Frequent pruning avoids this great evil, and enables us to give such a shape to the top, as will best agree with its nature and ensure fine fruit.

PEACH TREES.

Messrs. Gaylord & Tucker—Many old men, not in the habit of committing their thoughts to writing, are possessed of much useful knowledge, which should be gathered up and recorded by their juniors. My grandfather, Ralph Voorhees, of this town, has long been a most successful cultivator of peach and plum trees; and from information derived from him, I select for publication a few hints, together with some particulars obtained from other sources.

Peach stones should be buried in the fall, in dry ground; cover them slightly; freezing is no injury. In the spring dig them up, crack them, but leave the pits within the shells, as this is most according to nature, and so plant them. If the stones are not cracked when planted, they may not vegetate until the second year; and indeed, my informant has known them in one instance, to lie half a dozen years before coming up.

July, though a good time for inoculating plum trees, is too early for the peach. If peach trees are inoculated in this month, every rain causes the wound to send forth a quantity of gum, which becomes hard, and is hurtful to the buds. This evil will be diminished, if the operation is deferred until August, or what is still better, the early part of September. Set the buds on the north side of the tree; the sun will not be so likely to dry them up. Mr. Voorhces still adheres to the old notion, that the bark separates more readily from the wood at the full moon, and that this, consequently, is the best time for inoculation. Apricot buds may be set on plum trees with success. Such a tree, inoculated about ten years since, is now standing in this vicinity, and is still in thrifty condition. Last year it was loaded with apricots, which sold here in the country, at the rate of $4.00 per bushel.

Peach trees, in this region, are much infested by ants. These insects gnaw the bark, producing a flow of gum; they also gather upon the leaves, cause them to curl up, and turn yellow, thereby hurting the growth of the tree

I should like to hear whether the same plague exists elsewhere.

Urine, thrown frequently around the bodies and roots of the trees, is a powerful stimulant to their growth and preserves them in a great measure from the worm. Mr. Vorhees treated his trees in this manner last year; and among the whole number, consisting of about fifty, but one worm was detected during the season; nor were the ants so troublesome as formerly. Some persons cover the base of the tree with tar, and no doubt it is serviceable against both worms and ants. I believe the ravages of the worm may be prevented in a variety of ways, without resorting to the plan recommended in recent papers, of setting vermifuge plants, as tansy or wormwood, around the trees. It is worthy of inquiry, whether wormwood used for this purpose, would not be highly prejudicial to the growth of the tree, as this plant is noted for its power of draining the soil of its potash, an ingredient exceedingly useful to fertility. It is better to keep the earth for some distance around the trunk, clear of weeds, grass, and all living plants; and when young trees are set out, the ground should be kept under cultivation several years afterwards; for which purpose, one of the crops best adapted, is potatoes.

A. R. McCord.

La Grange, Dutchess co., N. Y. Feb. 1, 1843.

GRAFTING SCIONS, &c.

Messrs. Editors—As the season for grafting is near at hand, I will, with your consent, relate to your readers my small experience in this business. Though much has been written upon this subject, there may be some useful hints given yet.

I usually cut my scions sometime in the month of March, or before the buds have become swollen by the summer's heat. Select the most thrifty and vigorous shoots of the last year's growth, and cut them off a little below the circle where it commenced; tie them in bunches and affix their proper labels. Select also a dry piece of ground and dig a hole 2 or 3 feet deep, and wide enough to admit of the scions freely. Place pieces of boards upon the bottom, and around the sides of the pit, to prevent the scions from coming in contact with the earth. Cover the hole with a good sound board, then draw the earth over the top in the form of a mound, so as to have the center of about one foot in thickness. Boards are thrown over the whole, to prevent the rains from entering the pit and injuring the scions. Kept in this manner, I have never failed of having good success, when they were set at the right time. Many writers direct them to be set in April, but I never have had them do as well when set so early, owing to cold and chilly weather which frequently occurs, and checks supply of sap, and the scion dies for the want of nourishment. I think the best time for setting, is a short time before the trees begin to blossom, as the sap is then in full and steady circulation. A small quantity of wax spread upon the top of the scion will prevent the moisture from escaping, and the union will take place more speedily.

Have any of your readers ever tried the experiment of grafting the cherry upon wild stocks? I purchased several trees of this description of a gentleman who says, that "the wild stock is more hardy and better to graft upon than the cultivated kinds;" and I think he is right, for I saw some very large and thrifty trees, which have borne good crops and have all the appearance of living to a "good old age." Yours, &c.

Lawrence Smith.

Middlefield, Mass. Feb. 14, 1843.

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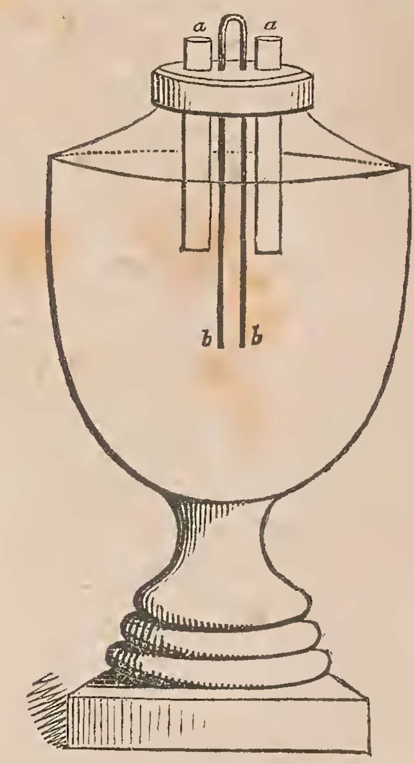
STATE AGRICULTURAL DEPOT.

MOWRY & VAIL have opened a large ware room at No. 127 River street, Troy. N. Y. for the reception and sale on commission, of all kinds of Agricultural Implements, and would take this opportunity to invite manufacturers of such articles, to give them a share of their consignments. They will also keep on hand at all times, an extensive assortment of various kinds of Seeds. They are the agents for the sale of Langdon's Horse Hoe, or Plow Cultivator, and are prepared to execute orders for them to almost any extent.

References.—George Vail, Esq. and Hon. Jonas C. Heartt, Troy; C. N. Bement, Esq. Albany. *Feb.* 24, 1843.

Domestic Economy.



LARD LAMP.—(Fig. 27.)

Messrs. Gaylord & Tucker—We are learning something from the pressure of necessity. I have within the last month, ascertained from actual experience, that there is no need of separating lard into oleine and stearine for lights. The lard itself, simply melted and poured into lamps either of metal or glass, answers perfectly, if there be two tubes for the wicks, of copper, two inches long; and between these, a copper wire of the size of a small goose quill, bent in the form of a staple, be inserted through two holes, so that the ends will nearly reach the bottom of the oil, and the bent part of the staple remain half an inch above the top of the tubes for the wicks. When lard is five cents a pound, one cent's worth, with such a lamp, will give you a good light from 6 to 11 o'clock, or for 5 hours. *a, a,* tubes for the wicks; *b, b,* the lower ends of the staple. The metalic arms of an old umbrella, answer very well for staples. The only precaution in their use, is when you extinguish your lamp at night, to raise the wick an inch, so that the cold lard in the bottom of the lamp, may not pull them too low when the top is unscrewed to replenish them. I have bored holes for staples, and fixed all my lamps in this way. The best candles do not give a better light.

Very truly, your ob't serv't, John Lewis.

Frankfort, Ky., Dec. 1842.

"Scotch Drink."—Before closing, permit me to return my thanks, to E. Cornell, of Ithaca, for his notice of the "Scotch Drink," in the September number of the Cultivator; and we can assure Mr. Cornell, that so far as the oat meal, being injurious in its raw state, in water we find it to be one of the best drinks for harvests, that we ever tried; and it was preferred by most of our workmen. One of our workmen, however, remarked that he thought it would be still better, if the oat meal was dried, and browned over the fire, before using. We think so too, and intend trying it so, the coming season; and we would recommend to all our farmers, to try the "Scotch Drink," and they will find it to be much better than cider, or any other liquors, for field drink.

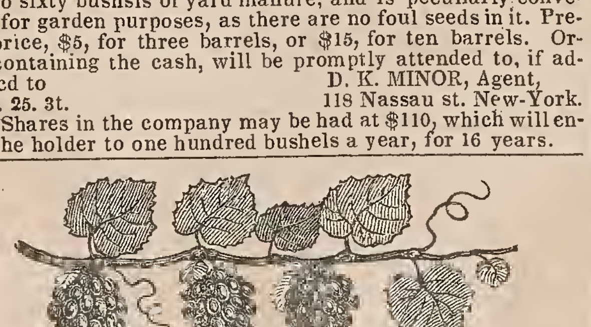
L. Durand.

POUDRETTE AS A MANURE,

MAY be had, a superior article, in barrels of four bushels each. This manure has been used extensively on Long Island, in New Jersey, Connecticut, and other states, for several years past, and has been found an excellent fertilizer. A barrel, four bushels, is considered equal in fertilizing properties, to sixty bushsls of yard manure, and is peculiarly convenient for garden purposes, as there are no foul seeds in it. Present price, $5, for three barrels, or $15, for ten barrels. Orders containing the cash, will be promptly attended to, if addressed to D. K. MINOR, Agent,

Jan. 25. 3t. 118 Nassau st. New-York.

☞ Shares in the company may be had at $110, which will entitle the holder to one hundred bushels a year, for 16 years.



ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase, will receive such instructions as will enable them to cultivate the grape with entire success. (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c that they will generally ripen well and produce good fruit, when planted in most of the northern, all the western, middle and southern states.

New-York, Jan. 25, 1842. 2t.

TOWNLEY'S PATENT PREMIUM BEE HIVES.

INDIVIDUAL rights for constructing and using the above hives, may be obtained for five dollars cash, by addressing the subscriber. All letters to be post paid.

Also for sale, a Treatise on the Cultivation and Management of Honey Bees, by the subscriber, 75 Thompson st., New-York.

Feb. 7, 1843. EDWARD TOWNLEY.

AGRICULTURAL REPOSITORY,

SEED Store, and Wire Cloth Manufactory, 31 Fulton, and 79 Barclay sts., New-York.—Whiting's Wiskonsin Plow, a superior article, Hall's improved Horse Power, and scarfed self-supporting Chain, with side links; with this Power, two horses will do as much as four on the common Lever Horse Power, for two horses; this Power will occupy 4½ by 10 feet. Also a general assortment of Farming Utensils and Seeds, Brass, Copper and Iron Wire, Sieves, Safes, Cages, &c.

New-York, Feb. 1843. JOHN MOORE.

RUGGLES, NOURSE & MASON'S SUPERIOR WORCESTER PLOWS.

THE American Institute at their Fair, held at New-York, for the whole Union, and the Massachusetts Charitable Association at their Fair, held at Boston, each awarded to Ruggles, Nourse & Mason, medals for the best and most perfect plows; and at the plowing matches of the Agricultural Society in the justly celebrated agricultural county of Worcester, in 1837, '38, '39, and '40, all the premiums for the best work in the field, were awarded to competitors using Ruggles, Nourse & Mason's plows.

In addition to the above, the New-York State Agricultural Society, at their Fair, held in Albany, in September last, awarded the premium for the best plowing to John Keeler, (see Cultivator, vol. IX, p. 178,) who on that occasion used one of the above plows.

A complete assortment of them, including Side Hill, Subsoil, and Corn Plows, Cultivators, Straw Cutters, &c. for sale at manufacturer's prices, by

Feb. 24, 1843. PRUYN, WILSON & VOSBURGH,
39 State st. Albany.

TO RENT, FOR SALE, OR EXCHANGE, THE WOODVALE MILLS.

THESE Mills, (a Grist Mill and Saw Mill,) are situated in the pleasant town of Morris, in Morris co., New Jersey, to which there is access by a railroad, in three hours from New-York city, and command a good run of custom.

The Grist Mill consists of a building 25 by 65 feet, three stories high, with a wing 20 feet square, built within a few years, in the best manner, by days work; containing two good pairs of Burr Stones, with power and room for one or two pairs more; Bolts, Cleaning Machine, &c. of the first quality. In it are also the complete fixtures of a Linseed Oil Mill of the most approved construction, including one of the most powerful Hydrostatic Presses in this country; which would either be sold with the mill or reserved, as might suit the purchaser. The mill premises comprise about five acres of land, on which are an Overseer's House, Barn, and a spring of the purest water.

The Saw Mill, which adjoins the Grist Mill, is the only one immediately in the town; and both that and the Grist Mill, in the hands of a competent and enterprising person, might readily be made to do a lucrative business.

These mills are eligibly situated for converting into a White Lead Factory, Cotton, or Wool Mill, Machine Shop, or Foundry.

They will be rented or sold alone, or together, with about thirty acres of wood and arable land adjoining. To be rented low to a good tenant; sold low for cash, and a large part of the purchase money allowed to lie on mortage for a term of years, if desired; or exchanged for good unincumbered property in any thriving town or city, within 500 miles of New-York.

Apply personally, or post paid, to RICHARD WOOD, at Morristown, N. J. or to RICHARD & GEORGE S. WOOD, No. 261 Pearl st., New-York. *Jan.* 7, 1843.

THE HORSE HOE, OR CULTIVATOR PLOW,

IS an implement constructed and patented, within the last year, by Barnabas Langdon of Troy, N. Y. It was put in use the last spring, summer, and fall, after much labor and practical experiment had been bestowed upon it. It was exhibited at the State Fair, and also at the Rensselaer County Fair, and received a premium at both. There has been a large number made and sold the past season, and they have been thoroughly tested in various ways, by some of the best and most experienced agriculturists in the counties of Rensselaer, Saratoga, and Washington, and all testify as to their utility and usefulness, and to their superiority over any implement of the kind in general use.

They not only do the work *much better, in much less time, and at one-half the expense,* of any other Cultivator now in use; which in these times of general low prices of agricultural productions, are *three important items.*

The cultivator plow is an article made for weeding and loosening the soil, between the hills of corn, potatoes, peas, beans, and all root plants.

When weeding, half hilling, or splitting down corn hills, the weed cutters are always to be used, as represented in the figure given in the Feb. No. of the Cultivator. This operation cuts up the weeds, loosens and pulverises the soil completely, up to the hill, and by cross plowing there will be very little left for the hand hoe to do.

When corn, potatoes, or any other crop, requires earthing or hilling more than the weed cutters can do, *they* are to be taken off, and the mold-boards are to be put on; both occupy the same position on the plow, and are secured to the standard by one bolt. The mold boards throw a beautiful furrow each way, and by cross plowing, will leave the field in excellent condition for some crops without any use of the hand hoe at all.

For digging potatoes or root crops, this implement is all that can be desired by the agriculturist; and when used for this purpose, the weed cutters should be on, and the plow drawn by a double team; direct the plow under the middle of the hill just deep enough to raise the potatoes to the surface, which it will do in a most expeditious and workmanlike manner, without bruising or cutting them in the least. These Cultivators are now manufactured at the corner of King and Jacob sts., where a large number are now being prepared for spring business. They are made of the best materials, fitted up in the best manner, with *share, weed cutters,* and *mold boards,* ground bright, ready for immediate use. The price for the article will be $10, at retail, and a fair discount made to dealers in agricultural implements.

Orders addressed to BARNABAS LANGDON, or MOWRY & VAIL, 127 River st., Troy, (his authorised agents,) will receive immediate despatch. All kinds of produce will be received by them, in pay for the same. *Feb.* 21, 1843.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. X.—NO. 4. ALBANY, N. Y., APRIL, 1843. CULT. & FAR. VOL. IV.—NO. 4.

PUBLISHED MONTHLY.

GAYLORD & TUCKER, EDITORS.

LUTHER TUCKER, PROPRIETOR.
Office, No. 20 Market-street, Albany.

One Dollar per annum—Six Copies for $5.
(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and 25 per cent commission on 100 or more.
Subscriptions to commence with a volume; and the money to be sent free of postage.

THE BACK VOLUMES OF THE CULTIVATOR,
Handsomely stitched in printed covers,
Can be furnished to new subscribers—Vols. I. II. III. IV. at 50 cents each, and Vols. V. VI. VII. VIII. IX. at $1. each.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

REMOVAL.

THE office of "The Cultivator" has been removed to *No. 20 Market-street,* a few doors south of the Exchange.

MONTHLY NOTICES.

COMMUNICATIONS have been received, during the past month, from Matilda W. Howard, Senex, N. Worthington, A. Brentnall, W. Mentelle, H. W. Tibbits, H. Mooers, Commentator, George Edwards, William Larkin, B. B., J. N. Keeler, L. A. Moody, E. Townley, A Friend to Ag. Improvement, L. G. N., Wm. Partridge, J. R. Speed, F. P. F., T. M. Niven, George Vail, C. N. Bement, R. F. Houston, E. Tucker, Will. C. Carr, Levi Durand, Alex. Walsh, J. H. Young, A Young Farmer, Dr. R. T. Underhill, G. M. Haywood & Co., J. J. Thomas, Henry Palmer, G. C. M., Frock & Trowsers, F.

ACKNOWLEDGMENTS.—We tender our thanks to Mr. COLMAN, for the "First Annual Report of the Monroe Co. Ag. Society, for 1842"—a handsome pamphlet of 68 pages—To Messrs. HOVEY & Co., Boston, for a copy of Dr. Harris' "Treatise on some of the Insects of New England, which are injurious to vegetation," an octavo vol. of 460 pages—To some unknown friend, for a copy of the N. J. State Gazette, containing a communication from Caleb Smith Green, Esq., President of the N. J. State Ag. Society, "on the decrease of Fruit"—To R. & G. S. WOOD, New-York, for their reprint of the "Medico-Chirurgical Review and Journal of Medicine," for January, an invaluable work for medical gentlemen; published quarterly, at $5,00 per annum—To ELWANGER & BARRY, proprietors of the Mount Hope Garden and Nursery, Rochester, for their Annual Catalogue for 1843—To W. R. PRINCE & Co., Flushing, for their Annual Catalogue of Bulbous and Tuberous rooted Flowers—To CAREY & HART, Booksellers, Philadelphia, for Nos. 2 and 3, of The Farmer's Encyclopedia—To the Editors of the Tribune. New-York, for the 2d No. of "Useful Works for the People"—To H. S. RANDALL, Esq. for a copy of his Address before the Cayuga Ag. Society—to A. G. CARLL, Esq. for an "Address before the Queens Co. Ag. Society, by Hon. Wm. T. McCoun"—To the EDITORS of *The New Farmer's Journal,* London, for the files of their paper for February—to the EDITOR of *The Farmer's Herald,* Chester, England, for the nos. of his paper for Jan., Feb. and March—also to P. L. SIMONDS, Esq. London, for a no. of the same work. This is a new monthly agricultural publication, 16 large octavo pages, at the low price of *3d* per no.; and if we may judge from the nos. before us, will deserve, and we doubt not will receive, an extensive circulation.

A FAT SHEEP.—The fattest sheep ever slaughtered in this vicinity, was exhibited at the Center Market on the 22d of Feb., by Messrs. McGuigan & Walsh. It was a 32 months old wether, a cross of the Cotswold and South Down breed, bred and fattened on the farm of J. M'D. M'INTYRE, Esq. near this city. Its live weight was 260 lbs. The carcase dressed, with the head on, which was very small, weighed 210 lbs., showing a difference of less than one-fifth between the live weight and carcase. The only feed of this sheep during the past summer, was a clover pasture. From the 1st of October to 15th Nov. he was hurdled with others upon turneps. From that time till he was slaughtered, he was fed, with three South Down bucks, under cover, with turneps, buckwheat and clover. One bushel of turneps and three quarts of buckwheat, together with about 2 lbs. hay, were fed to the four daily. Mr. McIntyre is still feeding the South Downs, which are destined for the New-York market on the opening of navigation.

FAT OX AND CALF.—On the same occasion, (Washington's birth day,) Messrs. M'GUIGAN & WALSH exhibited the carcase of an ox, fattened by Messrs. Terry & Hubbard of Sangerfield, whose live weight was 3,300 lbs.—dead weight 2,541 lbs.—and a calf fed by Mr. J. Cary of Rensselaer county, 13 weeks and 4 days old, whose live weight was 478 lbs.—carcase, 386 lbs.

"HEREFORD HALL."—We last week visited Mr. Corning's farm, situate on the west bank of the Hudson, about three miles below this city, to which Mr. Sotham, who now occupies it, has given the name of "Hereford Hall." We found the Herefords and Cotswolds in fine condition, and rapidly increasing. Mr. S. informed us that from nine ewes which came in first, he had 20 lambs—5 ewes having twins, and 3 had 3 each. Eleven of his Hereford cows had calved since the first of January, and he is now making from their milk, over 60 lbs. of butter per week. His calves, which were in fine condition, he feeds on skim-milk and flax seed jelly, mixing one pailfull of the jelly with four of the milk. Mr. S. informed us that it was his intention to keep an exact account of all the butter and cheese made from his Herefords during the season, the result of which should be given in the Cultivator, in order to show that they deserve the credit he claims for them as dairy cows. He wishes, and we second the motion, that other farmers would keep a similar account, that the results with different breeds may be compared.

MISDIRECTION OF LETTERS.—In forwarding to us a letter, misdirected to Philadelphia, the postmaster of that city wrote the following note:—"Letters for yourselves and other publishers are so *frequently* misdirected to Philadelphia, that I would suggest to you the propriety of publishing an article on the subject in your useful and widely circulated paper." We presume that more than one-half of the letters supposed to be lost in the mail, fail to reach their proper destination through carelessness in directing them. We have several times had letters forwarded to us, which had been misdirected to Philadelphia, New-York, Utica, Auburn, and Rochester; and in several instances where letters have failed to arrive, we have been inclined to lay the blame rather to misdirection than to the post office department.

FARM HOUSES, &c.—We give to-day, a plan of a Farm House, from one of our lady readers, the wife of our friend and correspondent SANFORD HOWARD, whose name we are pleased to introduce to our readers, and from whom we should be much gratified to receive frequent contributions. We have also in the hands of the engraver, the plans of the necessary out-buildings for the farm house given in our Jan. No. by Mr. NIVEN—also another plan of a farm house, in the Tudor style of architecture, from the same gentleman, which will be given next month. In the mean time, without the knowledge of Mr. N., we take the liberty to recommend to any of our friends who may want designs and plans of buildings, to apply to Mr. Niven, who is a practical architect, and who we presume will furnish such designs, with the necessary specifications, working plans, &c. for a reasonable compensation. Address, post paid, T. M. Niven, Esq. Newburgh, N. Y.

CORN STALK SUGAR.—Extract of a letter from WM. C. RODGERS, Esq., Caledonia, Tenn., to the editors of the Cultivator:—"Mr. J. L. VAUGHAN, one of your subscribers, has tried the experiment of making sugar from corn stalks, but did not succeed altogether agreeably to his expectations; but he intends this year to plant eight or ten acres, for the purpose of making another trial. He planted late in June last year, and an early frost killed the corn before he began. From one acre of corn, however, he made about seventy gallons of molasses of as good a quality as I ever saw." We have seen it stated in a Tennessee paper, that the press used by Mr. Vaughan to press the juice from the stalk, cost but $6. Will Mr. V. oblige us with a description of his press, for the benefit of our readers?

BERKSHIRES.—In our notice of the premiums awarded by the Hancock (Ga.) Planters' Club, in our Jan. No. we stated that the first premiums on swine "were awarded to Col. John Bonner, on Rip Van Winkle and Nonesuch, two animals sent him by Mr. Bement last autumn." In this, we made a slight, though unintentional mistake. The premium for the best sow was divided between "Nonesuch" and the "Flower of Orange," both owned by Col. Bonner. "Flower of Orange" was bred by Messrs. A. & G. Brentnall of Canterbury, Orange county, and was considered by them as the best sow they ever bred or imported, and they consider her (if their experience and observation amount to any thing) second to no sow of her size in the Union. They (A. & G. B.) have sold to Col. Bonner seven sows and a boar, which have all met his decided approbation, and some of the animals at prices more than double elsewhere paid to celebrated breeders." Col. Bonner has choice selections from all the best piggeries in this State, and we unite with Mr. Brentnall in recommending our southern friends to him for their supply of Berkshires; and we think we may safely recommend those who wish for good specimens of the same breed from this State, to the Messrs. Brentnall.

PLOWS.—At page 184, vol. 9, we gave an extract of a letter from Baltimore, relating to a trial of plows said to have taken place near that city. We have received a letter from Mr. MOOERS, stating the circumstances under which that trial took place, which accounts very satisfactorily for the heavy draft charged to Barnaby & Mooers' Side-hill Plow. We thought then that there must have been some mistake about the matter, and would cheerfully publish Mr. Mooers' letter, did we consider it necessary; but we think those who will take the trouble to look at the results of a previous trial at Baltimore, recorded at p. 156 of the same volume, will be satisfied as to the lightness of the draft of the Side-Hill Plow.

WHAT A DOLLAR WILL PURCHASE IN ILLINOIS.—A subscriber at Little Woods, says:—"I have at last succeeded in apprehending an Eastern bill perambulating our hard currency state. With us, the enclosed is equivalent to three bushels of wheat, eight bushels of corn, or twelve of oats—or 1 cwt. of beef or pork, a yearling steer, or a hecatomb of hogs. Will it pay for one year's subscription to the Cultivator, for mauger my resolutions of economy and retrenchment, I find I cannot do without it." Another correspondent in Illinois, says—"Blessed as we are with a rich soil, we cannot make money by farming, at present prices—wheat 31 to 35 cents—corn 8 to 9 cents—pork, $1,00 to $1,50 per 100 lbs. and no money even at these low prices."

PRICES IN INDIANA.—A letter from a correspondent in Davies county, says:—"Pork is selling here at from $1,00 to $2,00 per 100 lbs.—wheat, 37½ cents per bushel—corn, 12½ cents, and other produce at similar rates."

PRICES IN MISSOURI.—Our agent at Hannibal says:—"Wheat is only 25 cents cash per bushel—corn, 10 to 12½ cents—pork, $1,50 per 100 lbs., and stock cheaper."

KNIT DRESS.—At the Fair of the Suffolk co. (N. Y.) Ag. Society, in Oct. last, a premium was awarded to Miss Elizabeth Thompson, for a cotton and worsted dress, knit whole, and without any sewing. The skirt was knit with three threads on five needles, and the waist with two needles and one thread.

LOUISIANA.—The 2d Fair of the Louisiana State Ag. Association, was held at Baton Rouge, on the 10th Jan., and was well attended—the exhibition attracting there, as others have in other places, much more attention than was anticipated. Among the recipients of premiums, we are pleased to see the names of a number of our subscribers in that state.

SCIONS.—"F. P. F.," Bridport, Vt., is informed that scions of select varieties of fruit may be had of nurserymen. The price, we believe, is the price of the tree for a dozen scions.

REAPING MACHINE.—"A Young Farmer" wishes to know if the harvesting machine mentioned in the Dec. No. of the Cultivator for 1841, by Solon Robinson, Esq. has answered the expectations there held out. Will Mr. R. please inform us? If the machine has proved successful, we should be glad to receive a description and drawing of it.

THE FARMER'S ENCYCLOPEDIA.—The Nos. of this work are promptly issued, twice a month, by Carey & Hart, Philadelphia. Nos. 2 and 3 have been received; the first is adorned with a plate representing the different varieties of Wheat, with its most destructive enemies, and the latter with a view of a Russian Beehive and the *Echium vulgare,* or Ciniak, with its root, efflorescence and nut-like fruit. The work is to be completed in 16 Nos. at 25 cents each.

NEW WORK.—Prof. Kirtland of Ohio, has a work ready for the press, entitled "The Western Orchardist, adapted to the use of Farmers, Horticulturists, and Cultivators of Fruits in the Western States of the Union." Its contents are mostly original—the result of the author's own experience and observation.

HUSSEY'S CORN AND COB CRUSHER, &c.—"E. B." of Princeton, Ill., inquires if this machine can be had in New-York, and whether Warren's Horse Power can be conveniently used to work it. We are not aware that Mr. Hussey's machine is for sale at any other place than by the proprietor, in Baltimore. It can be worked, we presume, with Warren's Horse Power. It is proper to remark, however, that we have received a letter from a correspondent in Virginia, who thinks that the purchasers of this power will be disappointed in their expectations respecting it, as he certainly has been. The letter has been mislaid, so that we cannot give the objections he brings against it; if it comes to light, we shall forward it to the venders of the power for their consideration. "C. B.'s" suggestions are under consideration. It is not improbable that we may adopt the plan he has proposed.

MADDER.—Mr. E. Tucker of Onondaga county, in answer to a request in our Feb. No., gives us his experience in the culture of madder. About eight years since, he procured seed roots at a cost of $20, and set out about half an acre, agreeably to the directions in the first volume of the Cultivator, on loose land, good for Indian corn or wheat, well manured. He tilled it three years, dug it, dried it in a kiln, and ground it in a grist mill. Thus prepared, the product was not worth over $20. Two or three of his acquaintances tried it, with similar results.

BUTTERNUT SUGAR.—"One of your Readers," from Brattleboro, Vt. recommends the repetition of an experiment (made in that county with success) of making sugar from the sap of the common butternut, *Juglans cathartica.* He says that in the instance alluded to, the "sap furnished as much and as good sugar as that of the maple." Experiments of this kind were tried in Connecticut more than forty years since, and have frequently been repeated since in New-England; but not, we imagine, with such success as to warrant a repetition. The sugar, unless very thoroughly cleared of its remaining molasses after graining, would be likely to retain too much of the cathartic properties which gave the tree its name, for common use.

STRAWBERRY SEEDS, of the variety inquired for by Mr. HOWARD of Windsor, Ct., are not to be had, and if they were, would not produce the same fruit. The only way to obtain the kind wanted, is to procure the plants.

☞ "G. E. M.," Greenfield, Mass., will be welcome to the articles he wants, provided we have any to spare. His communication shall appear in season for next winter's operations.

PRODUCT OF TWO COWS.—"A Friend to Agricultural Improvements" informs us that he keeps two ordinary cows, and that last spring he thought he would weigh the butter made from them through the season; not, however, with the idea of making all they possibly could, as his family used cream and milk as freely as ever, and he raised two calves. The product was 325 lbs., and the cows are still milking. This was certainly a good yield, and one which few common cows will equal.

The same correspondent says he likes the plan of a house given in our Feb. No., but that the oven should have been placed on the other side of the chimney, to prevent heating the buttery. He also objects to D. G. M.'s "Self-foddering Barn," as he thinks cattle will draw out more than is necessary, and that it will be trodden under foot and wasted.

NIGHT SOIL.—Our correspondent, R. F. Houston of Alabama, who inquires for the best method of preparing night soil for use, &c., will find all the information necessary in the communication of Mr. Woodfin, given at p. 48, current vol. of the Cultivator. He is also referred to page 200, vol. 9, for a method of preparing it practiced in England.

MICHAUX'S FOREST TREES.—D. C. wishes to know if the publication of this work, with Mr. Nuttall's additions, has been completed, the price, &c. We believe the volumes have all been published. The price of the 7 vols., with colored plates, is $35. It may be had of J. Dobson, publisher, Philadelphia, or we presume at bookstores in New-York.

QUEEN BEES.—We are sorry we cannot spare room farther to argue the question of the existence of such a thing as a queen bee with Mr. HENRY PALMER of New Marlboro, who is determined to believe in their non-existence, "the editors of the Cultivator and a great array of correspondents notwithstanding." Most of the questions he now asks, were answered at p. 155 of our last vol., to which he is referred.

VALUABLE COW.—The Amsterdam (N. Y.) Intelligencer says that Mr. J. Hagaman of that place, has a cow, that from the 1st of June, 1842, to the 1st of Feb. 1843, a period of eight months, yielded 202 lbs. of butter, and $5,56 worth of milk, sold; and now gives eight quarts of milk a day."

GEESE AND LAMBS.—J. Beach, Esq. of Eastkill, Greene county, who thinks it economy to take the Cultivator, even in these hard times, because he is sure he saves ten dollars a year by it, says that a good farmer "with a thriving housewife, should keep geese. With good fences they are no trouble; it costs little to keep them, and a small quantity of tar and sulphur, mixed and put on the head and neck, at picking time, will protect them against the foxes till the next plucking time. My nine geese, last season, thus protected, all lived through well. Of my neighbor's thirty-two, not protected, the foxes took twenty-three. Mine were equally exposed as his. The same mixture, put on the head and neck of young lambs, will protect them for a month at least. I have oftened tried it, and saved them, while others have lost many of theirs. It may be repeated at any time, if the lamb is not large enough to protect itself. The materials are in the reach of every farmer, and will not cost one cent a head. Can any of your correspondents tell of any protection to our dunghill fowls, against minks, (we have many of them in our streams and mill dams,) short of shutting them up nights?"

THE TIMES IN VIRGINIA.—We make the following extract from a letter form an esteemed friend at Lynchburg:—"We are not prosperous; our late crop of wheat was greatly injured, and in many instances totally destroyed by the rust. This is the third crop, in regular succession, that has been a more general failure than any before recollected. Our tobacco crop, too, a very important one in this part of the State, is a very inferior one, in consequence, it is believed, of the wetness of the season. In addition, we had in the month of July a most destructive flood, which pervaded an extensive district, and did great injury to the crops and lands. And last, though not least, we have overbanked, which has not only produced overtrading, but overaction in all the departments of life—improvident contracts and every species of personal expense, and are now suffering the effects of a rapidly decreasing currency—are in that state of contraction or collapse which, though not regularly, yet as certainly follows an improper expansion, as the night succeeds day. Our legislative quacks are proposing various remedies, stay laws, valuation laws, issues by the banks; and some even go so far as to propose another suspension of specie payments—one of the effects of which would be, finally, to renew that portion of suffering which we have already passed through. But it is to be hoped that none of these nostrums will be forced on the patient, as some of the best judges think they would only aggravate the disease, and that nothing but *industry, economy,* and *time* will cure it."

"THE SOIL AND THE MIND."—A correspondent in New-Jersey, "H. W. S. C.," says:—"The harder the times, the more need I have of studying and contriving the best means of getting along, and consequently I cannot afford to give up so valuable an assistant as the Cultivator. Among the many points of resemblance between the 'soil and mind,' there seems to me scarcely one more striking than the effect of constant cultivation. Keep the ground loose, and prepared to receive the benefit of all the favorable influences which are brought to bear upon it; and keep the mind ever active and open to receive whatever information it meets with; to digest it well, and choose that which is true and sound, rejecting the false and hurtful. And so I say to the farmer, read—read—read; if you can't get hold of new works, read the old ones over, and you will find the effect is like plowing up an old field. There is no reason why a farmer should not cultivate his mind as well as his land; and the man who does both, in a proper spirit, is the truest philosopher and the happiest man."

"USEFUL WORKS FOR THE PEOPLE."—Under this title, Messrs. GREELY & Co., publishers of the *New-York Tribune*, have commenced the publication of a series of works, in pamphlet form, intended, by their cheapness, for general circulation. The first number, containing "Farnham's Travels through Oregon," we have not seen. The second number, just issued, contains the very valuable Report of the Hon. H. L. ELLSWORTH, Com. of the Patent Office, (for an extended notice of which, see next column of this paper,) on the "Improvements in Agriculture, Arts, &c. in the United States," made to Congress at its late session—together with a "Treatise on raising Swine, and the best method of fattening Pork," from Mr. COLMAN'S Fourth Report; and an article on "Geology as connected with Agriculture," from the pen of our associate, Mr. GAYLORD—making together a pamphlet of 80 closely printed octavo pages, put up in the style of the Magazines, and all for *twenty-five* cents, or five copies for $1,00. Orders by mail, free of postage, addressed to "Editors Tribune, New-York," will be duly attended to. The work may also be had of GEO. JONES, newspaper agent, in this city. It should be in the hands of every farmer in the country, and we think many of our statesmen might find the study of it an advantage.

MORSE'S CEREOGRAPHIC ATLAS.—We have received the second sheet of this Atlas, embracing maps of Florida, Georgia, Alabama, Mississippi, Louisiana, New-York, and New-York city, eight in number. The Atlas is got up in a large quarto form, in a beautiful style, and for minuteness and correctness, will not be exceeded by any Atlas of the United States. It is issued at the office of the New-York Observer, and furnished gratuitously to subscribers to that excellent Journal. Mr. Morse's plan is a comprehensive one; and on its completion will furnish a series of maps invaluable to the scholar and general reader.

WHEAT CROP OF PITTSFIELD, MICH.—We find the following facts (certified to, by six respectable gentlemen,) respecting the wheat crop of this town in 1842, in a western paper:—"Number of acres harvested, 2,997. Number of bushels, 50,408, being a fraction over 16 bushels and 2 pecks per acre, on average. Number of acres sowed 3,659, being an excess over last year of 662 acres. The town contains a population of 1,300, and allowing 5 bushels for the consumption of every man, woman and child, and 4,574 bushels for seed, would leave a surplus of 39, 424 bushels for market. This, at a dollar a bushel, would clear every farmer of debt, and purchase his wife a *Silk Dress*. If any town in this county or state, have beat us, we should like to know it."

MR. ELLSWORTH'S REPORT FOR 1842.

THERE can be but one opinion as to the intelligence, zeal and industry, brought by the presiding officer of the Patent Office at Washington, to the fulfilment of his duties. His Report for the year 1842, (the receipt of which was acknowledged by us last month,) is before us, and we doubt not, it will be considered by the great mass of the people, one of the most valuable the past session of congress has produced. Of its contents, we shall proceed to give a brief notice.

It appears, that the patents issued the past year were 517. Re-issued, 13; and 15 improved. During the same time, 352 patents have expired. The receipts for 1842, amount to $35,790 96; the expenses, $23,154 48; showing at least one department at Washington, not bankrupt in its finances. The whole number of patents granted in the United States, previous to January, 1843, was 12,992. His remarks on the necessity of such additions to the Library, as shall enable applicants to determine, by reference to former projects or present patents of the same kind at home or abroad, the propriety of taking out patents, are evidently just. But it is with his remarks, and the facts he has collected on Agriculture, that we have at present to do. These are included in an appendix of some 100 pages.

And first, is a tabular estimate of the crops for 1842. It is based, of course, on the U. S. Agricultural census of 1840, but corrected with great care; and so far as our correspondence with all parts of the Union enables us to judge, with a good degree of correctness. We subjoin the aggregate of some of the most important products, and such of our readers as please, may compare the products of 1839 and 1842 by referring to the statistical tables in a former volume of the Cultivator.

Wheat, bush.	102,317,340	Tons of hay,..	14,053,355
Barley, ...	3,871,622	" flax & hemp,	158,569
Oats,.........	150,883,617	lbs. of Tobacco,	194,694,891
Rye,.........	22,762,952	lbs. of Cotton,	683,333,231
Buckwheat,...	9,483,409	lbs. of Rice, ..	94,007,484
Indian Corn,..	441,829,246	lbs. of Cocoons,	244,124
Potatoes,.....	135,883,381	lbs. of Sugar,..	142,445,199

This statement is followed up by remarks on the several crops, and the causes which have increased or diminished them for the current year; on the various new products that promise to become important aids to Agriculture, such as the making of oil from lard, sugar from corn-stalks, &c., and on the state of the markets at home and abroad; and the probable results of the efforts now making, to extend the consumption of our grain and meat in foreign countries. On all these topics, and many others, he has brought together a mass of facts, which cannot fail to be examined with much interest.

Those parts of the Report relating to the manufacture of sugar from corn-stalks, and the conversion of lard into oil, with the correspondence accompanying them, are the best and most complete accounts of these processes yet given to the public, and are certainly most opportune, as the attention of farmers in all parts of the country has of late been much directed to them. The thanks of the community are due to Mr. Ellsworth.

NATURAL HISTORY OF NEW-YORK.

WE have received three more volumes of this splendid work; consisting of Prof. Emmons' Report of the 2d Geological District, Dr. DeKay's continuation of the Zoology of the State, embracing the reptiles and fishes; and a volume of plates illustrative of the various species of these animals found in the state. The engravings of this part, are much superior in execution, as a whole, to those of the Mammalia, and will well compare with the best specimens of animal engraving extant. The descriptive part by Dr. DeKay, is well written. and evidently with great care. That it should be perfect, no one acquainted with the natural sciences will expect, but all will rejoice at such an immense advance towards a full and accurate knowledge of the animals of this state, as is disclosed in these volumes.

Prof. Emmons has given an excellent report on the geology of the district assigned him; with a great variety of engraved views, maps and sections, rendering his descriptions much more clear and satisfactory. Having in our two last numbers, devoted so much space to a notice of Prof. Vanuxem's Report, we must pass over that of the 2d district, briefly; particularly as the names for the systems and series of rocks are the same in both, with the exception that the body called the Pulaski shales by Prof. V., are named the Lorrain shales by Prof. E., as the development of this rock is much more complete at the latter than at the former place. Prof. Emmons contends strongly that the lower limestones are primitive in the same sense, and have the same origin as the admitted primitive rocks, such as granite, gneiss, &c., and we think some of his arguments and examples difficult of refutation or evasion. As showing the distance to which blocks of this primitive crystalized or dolomite limestone has traveled, we may say that we have seen large specimens of it, plates of yellow mica mingled with the lime crystals, on the highlands in the south part of Onondaga co. The nearest point to limestone of this kind, is in the beds described by Prof E. in the east part of St. Lawrence co.

The utility and importance of this great State work, becomes more apparent as the work advances; and we trust the efforts to distribute the copies of the work throughout the state will be successful. Next to a knowledge of ourselves, is a knowledge of the world around us, and the varied beings by which it is tenanted.

Answers to Inquiries, &c.

PARING AND BURNING SOIL FOR MANURE.

"Messrs. Editors—Will you please give us through your paper, the manner of paring and burning the soil for manure, and the way to apply it after it is prepared?
Livingston, Ala. Jan. 1843. R. F. H."

Paring and burning the soil, is a practice we have never known adopted in this country to any extent, although it is common in some parts of Britain and the continent. It is practiced, to clean the soil of all foul vegetables, or such as are not wanted, and to procure the ashes as a manure, which is highly prized. All the vegetable matter is charred, or converted into ashes, and the earthy matters of the soil, particularly the clay and the lime, are brought into that condition in which they are most useful in the soil. There are a variety of implements used for paring lands, some of which are worked by hand, and some by horses; the latter, always where the turf is heavy or abounding in coarse grasses. Figures of quite a number of these implements, may be found in the British Husbandry, vol. I, page 342—348. Paring is rarely carried into effect to a greater depth than 3 inches, and frequently not more than an inch is cut off; the average may be about 2 inches. The work should be done in the spring, that there may be time for the drying and burning in the summer. It has been found that the common plow with the wing of the share made sharp, will answer very well for paring, where the sward is tolerably good and the surface level.

When the turf is dry enough to burn, it is piled in large heaps of from 10 to 20 cart loads each, carried up like a chimney with an opening in the middle, and fired by the fuel that happens to be the most convenient. The turf must be laid close to keep out any draft of air through the heap, as otherwise the heap is liable to be only partially burned. Should the fire break out, it should be stopped with more turf, or covered with fine mold or ashes; and in this state, heavy rains will do little injury, as the heat will prevent it penetrating the pile. In some cases when a heap is once well fired, turf is continually brought and piled on, until the whole is expended. As too much burning is considered injurious, the burners, or the cultivators, open these heaps when about half burned, with a shovel, and carry upon the land the mass, as fast as it is fit for use. The methods of burning, however, are numerous, and the one we have described is as simple and easy as any. The quantity of ashes will of course depend on the nature of the soil burned. When performed on turf of a medium quality, and of the thickness of two inches, it has been known to give from 2,000 to 2,400 bushels per acre. On light dry soils, paring and burning is not advisable, as it makes such lands lighter and dryer; on clays and heavy loams its effects are most beneficial.

In the work to which we have alluded, a summary of the best practice is given, from which we condense the following directions:

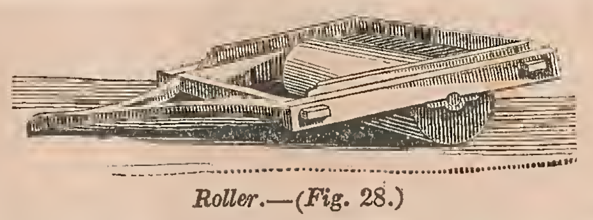
1. Drain perfectly, and lay dry before commencing paring.
2. Regulate the thickness of the paring, by the nature and depth of the turf.
3. Burn slowly, but completely, so as to reduce the whole to ashes.
4. Spread these ashes upon a shallow plowing, and as fresh as possible.
5. If the land is clayey, mix a moderate quantity of lime with the ashes.
6. Sow the seeds as promptly as may be, after the ashes are spread and plowed in.
7. Commence with turneps or barley; never sow wheat till the soil is in good tilth.
8. Apply the whole manure produced by the crops, to the ground on which they are grown.

ROLLERS.

"Messrs. Editors—Will you, or some of your subscribers, furnish a cheap plain cut of the best roller for a sandy soil, and much oblige
A Subscriber at the South."

The plan of a roller we here give, (see fig. 28,) is one of the most simple kind, and at the same time very effective.

It is simply a log from 6 to 9 feet in length, the diameter at each end the same, and turning in the frame on iron pivots, square where driven into the wood, into which they should enter some 18 inches, the projecting parts to be carefully rounded so as to work easily in the frame. The diameter of the roller may be of any required size consistent with weight; but it must be remembered that the larger they are, the easier they will roll. The one we have used for many years, is about 34 inches in diameter, and we find works much easier for the team than a former one which was only 20 inches. There is another roller made by passing an auger through the center of the log, through which a 1½ inch iron rod is passed, secured at each end to the frame, by a head and screw. This roller is divided in the middle into two parts, kept at a little distance apart by an iron ring or washer slipped upon the axle or rod between them. This roller at the end of lands, turns more easily than when left whole, but is not materially better in other respects. Where a log of sufficient size was not convenient, we have seen a good roller made by spiking narrow plank on the outside of two fore wagon wheels, and then driving as a tire upon the center and each end, a stout iron bar. If not heavy enough, a frame work with a box may be put upon it, and loaded with stone as desired. There is no difference required between a roller for a sandy soil, and others, except that the lighter the soil the greater the pressure desired, and consequently the heavier the roller should be.



Roller.—(Fig. 28.)

MANURING MEADOWS.

"Editors of the Cultivator—A large part of the manures I make this winter, I wish to apply to my meadows. Shall I draw it on this winter or spring, or let it lie in the yard, or heap it till next fall? My manure is made from corn stalks, hay, straw, &c., fed to 100 sheep and 20 head of cattle, in yards. Some of my meadows will poach much, if cattle or carts are driven over them when the frost is out in the spring. I find that experienced farmers disagree on this subject, and I wish you to direct. H. Hull."
Claverack, Feb. 1843.

Our experience in manuring meadow land, would indicate that in all ordinary cases, manure should be rotted or composted before using. When applied in a long or green state, it will not spread as evenly; it will not produce so speedy or so good an effect; and it frequently, when applied in quantities, obstructs the action of the scythe and the rake. We have known long manures or straw, when spread on very dry land early in the spring, produce a good effect, as it checked the escape of moisture, and in that way benefitted the grasses. But we prefer forming our meadows and pastures in rotation with other crops, and in this way the manures are first applied to the crops, roots or corn, that receive the most benefit from fresh manures. In this method, manuring the grasses directly, except with a dressing of plaster, is not practiced, and is found to be unnecessary.

As it is inconvenient in some cases, to subject meadows to a rotation, manure must be applied, or the grass will fail in quantity and quality. The practice with the best farmers in England, and that which is the most successful here, is to manure them with good rotten dung as often as once in three years; the manure to be used as soon as the hay crop is off, if the season is wet; but if not, late in autumn or early in the spring, which latter practice is far the most common. When a meadow is manured, the quantity should first be evenly spread, then a fresh supply of good grass seeds sown over the whole, and the surface then thoroughly scratched with a light many toothed harrow, or well brushed with close thick set brush. In this way, a meadow may be fully renewed, and kept stocked with the best grasses. If "H. H." has a supply of swamp muck on his farm, he will find his stock of good manure greatly increased, if while heaping his manure in the yard or field, he adds to each load of yard dung, two loads of muck; since when placed in layers and fermented together, this compost is fully equal to the best stable manure. Meadows that are apt to poach, should never be trampled by animals when wet, nor should any meadow be fed as closely in the spring and fall, as too many are accustomed to do.

TREATMENT OF SOIL.

Mr. Sessions of Ionia, Mich., makes some inquiries respecting the management and improvement of his farm. It was originally covered with white, yellow, and burr oak. Part is sand, another part clay; and another part gravel, or stony. From this last part, the stones of suitable size have been drawn for fencing; the cobble stone is to be removed for building. The grounds are new, and in wheat. Mr. S. asks whether clover would succeed on such a soil—whether plaster would be useful—and to what crops such a soil is best adapted? On one side he has rich alluvial bottoms, and on the other timbered swales; and he asks, whether these may not be made available to the improvement of the farm, or fitted for cultivation without too much expense?

There would seem to be no difficulty in the treatment of such a soil, as that described by our correspondent. The sandy and gravelly parts are of course dry, and the clay division, if naturally wet may be made so by draining. There should not be too much anxiety to get rid of all the fine or small stones on the gravelly part, as if of lime or granite, they contain substances essential to fertility, and which they furnish by gradual decomposition. Lands have frequently been injured by a too close removal of small stones. We should think that clover could not fail on such lands, and that plaster would be highly valuable; certainly on such soils in western New-York, clover and plaster would be the first resort of the farmer. As to crops, if clover and wheat will succeed, Mr. S. need not fear that others will fail; and when exhausting crops are produced, they must be met by corresponding additions of manure. If the alluvial, or swale lands, are wanted for culture, the first step is to drain them thoroughly, and then they will be found the most productive of soils, particularly in roots and grasses. If they are relied upon as sources of manure, or for the means of fertilizing the other parts of the farm, the swamp muck or vegetable matter should be made into compost, by mixing with it stable or barn yard manure, in the proportion of two-thirds muck to one-third manure, the whole allowed to ferment, and then after being thoroughly shoveled together, it may be applied as wanted.

OIL SCRAPS AS A MANURE.

"Messrs. Editors—I wish to learn through your Cultivator, the manner in which I can use to best advantage as manure, the sediment of oil known as 'oil scraps.' I have thought that by making compost with that, swamp muck, and barn yard manure, it would be most valuable; but from the exceedingly heating nature of it, I have feared to make any application, without some advice as to preparation and quantity. Would coarse beach sand, or the coal and wood cinders, or coarse ashes from the furnaces of engines, or ground plaster, be useful in qualifying it? A Subscriber."
Cowton, Essex co. N. J.

The substance named by our correspondent, is a valuable manure, whether mixed with muck, or stable manure, or applied directly to the soil. In the latter case, care would be necessary not to use it too liberally, for its stimulating properties are felt by plants most powerfully. Dr. Dana says—"All fats and oils give off a great quantity of carbonic acid, and end by becoming acids. As their ultimate elements are the same as those of plants, it may be inferred, that under the influence of growing plants, fats and oils are decomposed, and become vegetable food. But there is another action of fats and oils on silicates; they not only let loose the alkali of silicates by the carbonic acid they evolve, but the oils now become acids, immediately combine with this alkali, and imperfect soaps are formed. Soaps are truly chemical salts."

Coal and wood cinders, or coarse ashes, are excellent for mixing with swamp muck for composts, but if stable manures are used in the same mass, they are better if kept separate from the ashes by a layer of muck. Plaster may be used advantageously with the oil sediment, or with the composts. We think that were plaster used sufficiently to dry the oil sediment, and then sowed in drills with roots, or broadcast on crops or grass, the effect would be excellent. Perhaps some of our readers have experimented with this oil scrap or foots; if so, we should be pleased to learn from them the results.

TAN BARK.

Mr. J. W. A. Saunders of Buckingham co., Va., in a communication to us, says—"I have one important inquiry to make, and that is whether tan can be converted into manures? and whether Bommer's patent would have the same effect in its decomposition as on other substances? If so, it would be of great value to me, and I should like to obtain a patent. I have a pile of tan from the bark used in my tannery for ten years, at an average of 70 cords a year, or 700 cords. I have tried the well rotted tan as a top dressing on clover and small grain, and find it of some value, and intend using it extensively in that way hereafter, if you or some of your correspondents cannot aid my views of rendering it more valuable in some other form."

We have never used tan as a manure ourselves, nor are we aware of any instance where its value has been satisfactorily tested. In an early volume of the N. Y. Farmer, an instance is given, in which it was said to have proved highly valuable when made into compost. It has also been used with some success in ameliorating the condition of heavy clay soils. The *tannin* or astringent principle contained in bark, has been supposed to be injurious to plants, and when furnished in too large quantities would doubtless prove so. But when decomposed, this matter must be lost, and the remainder the same as any decayed wood or other vegetable matter, and subject to the same laws. We do not know whether Mr. Bommer has ever submitted this substance to his peculiar process of decomposition, but should think there could be no doubt as to the result. In one respect, tan, fresh from the pits, would be superior to most articles submitted by him to decomposition. It contains more or less lime and animal matter, which would so far further the operation or render the compost more useful. Perhaps Mr. Bommer can enlighten us on this topic; if so, we should be pleased to hear from him, as would doubtless many of our readers, who as well as Mr. S. have large quantities of tan they would be glad to convert into manure.

SUGAR FROM CORN.

We have received a great number of inquiries from from different parts of our country, on the subject of manufacturing sugar from Indian corn, of which the following will embrace all the essential points, and to which we shall give as full a reply as the present condition of the manufacture will admit.

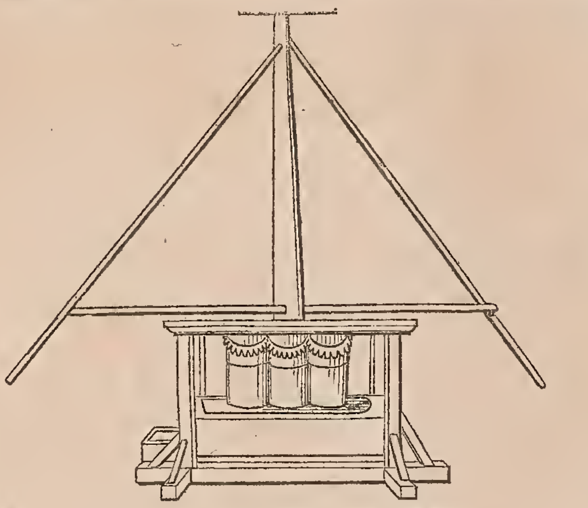
1. What is the best method of growing corn intended for making sugar?
2. Time of gathering and preparation for grinding?
3. Machinery for the manufacture?
4. Process of boiling, and granulation of the sugar?

1. In planting corn for sugar, two objects must be kept in view—the securing the greatest growth of stalks; and the prevention of the formation of ears. The kind of soil required for a great growth of corn, is so well known that it is unnecessary to describe it here. It must be rich, and should be friable, that it may be cultivated easily. A heavy clover lay, manured, and then turned over, rolled, and the surface harrowed fine, makes a good soil for a corn crop. Mr. Webb, the most successful

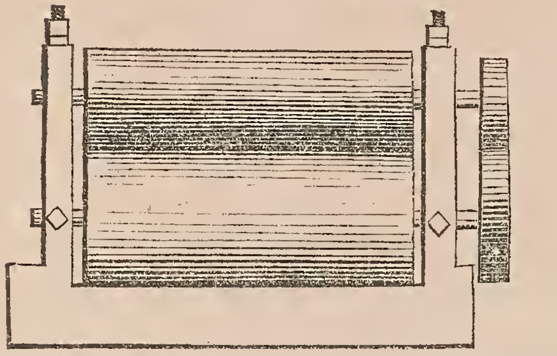
manufacturer of sugar thus far, directs that the corn be drilled in rows north and south, that the influence of the sun may be felt as much as possible, the rows to be two and a half feet apart, and the plants in the rows not more than two or three inches apart. This thick planting on a rich soil gives a great stand of corn, and in considerable degree prevents the formation of ears, as ears cannot be expected where the corn is as thick as is here directed. Mr. Blake of Indianapolis, made an extensive experiment last year, and from 4½ acres produced about 280 gallons of excellent molasses. He planted his corn, or rather drilled it in rows four feet apart, plants close set in the rows, but distance not stated. It is probable in planting corn for sugar, something should depend on the variety selected; as it is evident the smaller northern kinds would require closer planting than the tall southern or western kinds. We have not learned that any experiments have been instituted to test the comparative value of the several varieties of corn for sugar; though it is certain that large stalks yield more juice than small ones, in proportion to their size.

2. Theory indicated that a large portion of the sugar in the cornstalk would be lost, if ears were allowed to form; and experiments demonstrated that such was the case. Where corn is planted thick no ears will form, or only small and imperfect ones. If ears form, they must be broken or cut off; not too early, as their tenderness greatly increases the labor required. Any time previous to the formation of the grain on the cob will be soon enough. When the stalk is fully matured, or ripe, the process of cutting off the tops or the blossom part, and stripping off the leaves, must be performed. The early northern kinds will be fit for stripping in August, the later kinds will continue to ripen until in September or October, or until killed by the frosts. The tops and blades must be secured for fodder, of which they make the best quality. When topped and stripped, the stalks are cut up by the bottom, close to the ground, bound in bundles, and taken to the mill for grinding. It is found by experience that the corn can be topped and stripped much more rapidly on the hill, than if cut up previous to those operations. If the tops and leaves are not taken off, a quantity of the juice will be lost, and the formation of sugar rendered more difficult.

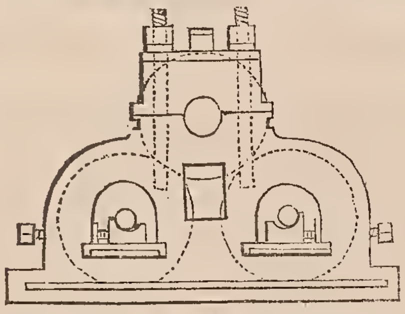
3. The machinery required for the manufacture of corn stalk sugar is the same in effect as that used in making cane sugar. It was at first supposed that wood cylinders might be used for the corn stalk, instead of the iron ones requisite for the cane, and all the experiments hitherto made, have been in mills of this kind. Experience shows, however, that iron mills must be used, it requiring more hardness and firmness than wood possesses to operate successfully for any length of time. We give the figures of two mills for grinding corn or cane, one upright, and the other horizontal. The first (fig. 29,) is a figure of the mill used by Mr. Webb and others, the past season, and is of wood, worked by horses. The other mill is of iron, and may be worked by water, steam or horse power. Mr. Webb describes the first mill as follow.: "It may be made with three upright wooden rollers, from 20 to 40 inches in length, turned so as to run true, and fitted into a strong frame work, consisting of two horizontal pieces, sustained by uprights. These pieces are morticed to admit wedges on each side of the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of wood work called the dumb returner, which directs them backwards, so that they pass through the rollers again on the left side of the middle one." The arms and braces used when the mill is worked by cattle or horses, are seen in the engraving. The iron mill (figs. 30 and 31,) does not differ greatly in principle from the wood one, except that the distance of the side rollers from the central one is regulated by screws, as seen in the engraving, and that when propelled by animal power, the upper roller is turned by cogs at one end, moved by others on a vertical shaft. The iron mills are the most expensive in the outset, but they are the most durable, less liable to get out of order, and separate the juice from the stalk much more perfectly than the wood mill. The experiments of Mr. Webb, the past season, from which so much was justly anticipated, failed in a great measure in consequence of his mill giving way on the second day of its use. Mr. Blake, whose well conducted experiment we have before noticed, used a wood mill, and found that a large part of the juice was lost, by the surface of the rollers soon becoming uneven, and not pressing the stalk properly. It is probable, therefore, that iron mills will be found the most economical in the end, and there is no necessity for their being very expensive. In both cases the rollers must move in or over reservoirs for the receiving the juice as it flows from the corn stalk.



Mr. Webb's Mill.—(Fig. 29.)



Side View of Iron Mill.—(Fig 30.)



End View of Iron Mill—(Fig. 31.)

4. We have not known, or heard of a single instance, where the attempt to manufacture sugar, or rather syrup from the juice, has failed. The valuable Report of Mr. Ellsworth, contains statements from all parts of the country, of the success which has attended the conversion of juice into syrup, but the instances were comparatively few in which the granulation of the syrup, or its conversion into sugar, was effected. In this, we apprehend, the greatest obstacle to the manufacture will be found. The simple fact, however, that such conversion has been repeatedly effected, shows there is nothing but experience and skill wanted to insure such a result at all times. When the manufacture of beet root sugar first commenced in France, granulation of the syrup was almost impossible; now the process is as certain and effectual as in the case of the cane or the maple. The great source of the difficulty seems to arise from the rapidity with which the juice passes into a state of partial fermentation, rendering its immediate reduction after extraction, indispensable. Beet root juice ferments immediately after it is pressed out, and it is said that in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Mr. Webb kept some corn juice for an hour without injury; but a great variety of experiments prove that it should be boiled as soon as possible. We give from a letter of Mr. Webb's, the following account of his process, because it is the result of practice rather than theory, he having made a beautiful sugar for two years by the process:

"The juice, after coming from the mill, stood for a short time to deposit some of its coarser impurities. It was then poured off and passed through a flannel strainer, to get rid of such matters as could be separated in that way. Lime water, called milk of lime, was then added in the proportion of one or two table spoonfulls to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from having too much or too little of the lime. A certain portion of this substance is doubtless necessary, and more or less than this will be injurious; but no precise directions can be given about. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed—taking care to complete this operation before boiling commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined from time to time, and if there was any appearance of feculent particles, which would not rise to the surface, it was again passed through the flannel strainer. In judging when the syrup is sufficiently boiled, a portion was taken between the thumb and finger, and if, when moderately cool, a thread half an inch long could be drawn, it was considered done, and poured into broad shallow vessels to crystalize. In some cases, crystallization commenced in 12 hours, in others not till after several days."

The following is a condensed view of the directions given by Prof. Mapes of New-York, a gentlemen who has paid much attention to the subject. The stalks (cane or corn,) to be cut as ripe as possible, but before any acetic acid is formed; litmus paper will turn red if any acid is present. Express the juice without loss of time, as every moment after cutting will deteriorate its quality. Clear lime water, 1 quart to 100 gallons of juice, to be added as soon as expressed, unless the juice shows acid with the litmus paper, when the lime is to be omitted, and a solution of sal. soda, or soda ash, added till it is precisely neutral. In this state, the juice must be evaporated in such an apparatus as to finish its charge in 30 minutes. Unless boiled quick, good crystalization is not to be expected. The time occupied from the cutting to the finishing the boiling, should not exceed one hour. To know when boiled enough, use Farenheit's Thermometer; 239° or 240° is the proper point. The instant a charge is finished, it must be thrown into a cooler large enough to contain several charges. The second charge, and so for each one, must be mixed with the preceding, by gently stirring, but no more stirring should be used than is necessary, as it will be injurious. When all is boiled, let the mass cool to 175° and then fill the sugar molds, which should hold not less than 14 galls. There must be a plug at the botom of the mold to allow the molasses to escape.

One of the most important steps in the process, and which is essential to the formation of sugar, is quick boiling. Long boiling renders the syrup dark, and prevents granulation. Mr. Webb, the last year, found it necessary to discard his former deep boilers, and substitute broad shallow vessels, in which the evaporation would proceed rapidly. The sugar made in this way, is of a finer quality than that made by longer boiling, and the crystalization is more perfect and certain. Syrup, however, made by quick boiling, as directed by Mr. Mapes, retains more of the peculiar taste of the cornstalk, than when boiled for a longer time. The sugar is free from this flavor, and Mr. Webb, to remove it from the molasses, recommends, after it is drained from the sugar, to dilute it with water, and boil it until this taste is lost. It is very probable, we think, that as the subject is farther investigated, and science is brought more efficiently to the aid the manufacturer, that the little obstacles impeding his progress will disappear, as they have done in many other cases already. Where failures in the formation of sugar have occurred, (every attempt to make molasses has succeeded,) they can easily be traced to the imperfections of the machinery, or the inexperience of the manufacturer, and will not be liable to again occur. There is scarcely room for doubt that a vast and profitable manufacture is opening upon the country, particularly the corn regions of the west and south; and there is every indication that the great importation of foreign sugars will soon cease, if not be changed to exportation.

USE OF POUDRETTE.

"I see by an advertisement in the last No. of the Cultivator, that the article of poudrette can be had in New-York, and at other times have seen a good deal said about its fertilizing effects; but I do not recollect to have seen anywhere, an acccount of the proper mode of using it upon the crops. I should he pleased, if you are in possession of information in regard to the use of this manure, of answers to the following queries: When is the proper time to apply it to corn?—when planting, or after it has come up?—and what quantity per hill? The best method of using it on the wheat crop; whether when seeding, or broadcast; if the latter, at what time, and how much per acre? If used broadcast, will it have the effect to hasten the ripening of the crop like yard or stable manure, or retard it like plaster? J. H."

Harrisonburg, Va., 1843.

Poudrette is usually applied to corn at the time of planting, and the quantity recommended is, from half a gill to a gill in each hill, to be dropped upon the corn, and covered at the proper depth.

On wheat it is sown broadcast, though if the wheat was drilled, the poudrette might be deposited at the same time, and by the same machine. Experiments have been made, in which from 15 to 70 bushels per acre have been used, and the best results have been obtained when the quantity applied was from 25 to 35 bushels per acre. Its effect on crops is the same as that of rich stable manure; applied too liberally to grain crops, it causes them to lodge in the same manner as other animal manures.

BEES.

"EDITORS OF THE CULTIVATOR—Some of your subscribers in this place have lost many of their bees, in the syrup of the confectioner. Some large swarms have been nearly ruined. They resort to these places by thousands, and but few return to their hive. Can you suggest a remedy? The occupants of the shop cannot work without a free circulation of air. *Millinet* has been used to keep the bees out, but it makes the air insufferably close. Would *wire gauze* answer a good purpose? If in your next number you can suggest any remedy for an obstacle more fatal in this place to the cultivation of bees, than all others, you will very much oblige A SUBSCRIBER."

Greenfield, Mass., 1843.

We have seen flies, bees, wasps, &c. excluded from rooms, by placing before the windows the perforated plates of tin from the buttonmaker's shops; and we have also known screens made of fine wire, used successfully for the same purpose. We have seen it stated as a singular fact in natural history, that flies, bees, &c. are effectually excluded by a wire gauze screen, even when the meshes were of a size to permit a free passage, if the protected window or passage, was not fronted by another open window or passage the light of which corresponded to the protected one. We should place more dependence on wire screens, than any other mode of prevention, as they would obstruct the air less, and may be wove so as to effectually exclude the bee. Care should be taken from the first, to allow no bees to get a taste of the sweets; since if this is once done, their exclusion will be ten fold more difficult.

NEW-YORK STATE AG. SOCIETY.

At the regular meeting of the Executive Committee of the New-York State Ag. Society, at the Geological Hall, on the 2d Wednesday of March, the following members were present: Messrs. Denniston, Leland, Prentice, Tucker, Walsh, M'Intyre, Bement and Hillhouse—Vice President Leland in the chair.

The Annual Report to the Legislature, embracing the Transactions of the State and County Agricultural Societies, so far as the latter have reported, was presented, and after examination, which occupied most of the time of the meeting, were approved, and directed to be transmitted to the Legislature, by Vice President Denniston of the Senate.

The committee appointed at a previous meeting to procure a room for the use of the Society in the old State Hall, reported that they had called on the Commissioners of the Land Office, who informed them that it would be necessary to apply to the Legislature, to effect the object desired. It was thereupon resolved, that Vice President Leland be a committee to procure the passage of a concurrent resolution by the Legislature, authorising the Commissioners of the Land Office to fit up a room for the use of the Society.

The Annual Report of the State Society, above alluded to, was presented to the Senate on the 9th of March, and on motion of Mr. Dickinson, chairman of the Committee on Agriculture, ten times the usual number, together with 500 copies for the State Ag. Society, and twenty copies for each County Ag. Society, were ordered printed. The vol. will be ready for distribution by the middle of this month. County Societies can have their twenty copies sent them, bound in the same style as the vol. of Transactions for last year, by remitting $5,00 to pay for the binding, to Luther Tucker, Secretary, Albany.

CATTLE SHOWS THIS YEAR.

The *Onondaga Co. Ag. Society* is the first in the field with its list of premiums to be awarded this year. The Fair is to be held at Syracuse, October 4, 5. In addition to the usual list of premiums, Mr. Fuller, the President, offers three premiums of $5,00 each, for the best conducted experiments to test the value of lime, plaster, and salt, as manures. Wm. Fuller, Skaneateles, President, and Enoch Marks, Navarino, Cor. Sec'y.

The *Chautauque Co. Society* have also issued their premium list. Their Fair is to be held at Fredonia, Sept. 29, 30. T. B. Campbell, Westfield, President, and Mr. Risley, Fredonia, Sec'y.

The *Oneida Ag. Society* have also issued their list of premiums, to be awarded at the next Fair, which is to be held at Vernon—time not fixed. Benj. P. Johnson, Rome, President, and Elon Comstock, Rome, Cor. Sec'y.

SPRING WHEAT.

There is a very large part of the United States not suitable to the production of winter wheat, or where it at best is but an uncertain crop, in which spring wheat is a very certain, and in most cases a productive one. This arises in a great degree from the severity of our winters, the frosts of which alternating with the thaws of spring, lift the fall sown wheat from the ground, and cause the death of the plant. This is particularly the case, where from the abundance of clay in the soil, it is disposed to be retentive of moisture as well as heavy in working. There can be little doubt that in all parts of the country favorable to winter wheat, that grain will continue to be grown in preference to spring wheat; it is more productive, and makes a finer flour, two causes sufficient to insure a preference; but spring wheat makes excellent bread, and besides the plant escapes the hazards of our winters, which is enough to insure an extensive culture.

Spring wheat requires a soil rich and in good condition, not so much from the recent application of manures, as from a series of good treatment. Like all the other grain crops, if recent or fresh manure is applied liberally to the soil as a preparative for the crop, it is most likely to prove injurious, giving a greater growth to the straw than to the ear, and rendering it so weak as almost to insure an attack of the rust, or its lodging in the field. It is a good plan to apply manures to a crop of corn or roots, and let spring wheat follow these. Thoroughly rotted manures, or compost, however, may be applied directly to the wheat crop.

Spring wheat should be sown early. We have hardly ever known a good, or even an ordinary crop produced, where this was neglected. Early sowing favors early maturity, and thus avoids the danger of mildew or rust, to which this grain, if sown late, is very liable. It also enables the plant to throw up its ears, and prepare the juices necessary for the perfection of the berry, before the extreme heats of summer deprive the plants of the moisture necessary for this purpose.

It is from this necessity of having the soil early prepared for spring wheat, that it becomes desirable very frequently, to have the fields on which it is to be sown, plowed in the fall. If the soil is free from surface water, (and no soil on which water stands is fit for a crop,) fall plowed lands are seen in the early spring, to present a surface finely pulverized by the action of frost, and fit for the reception of seed much earlier than they could otherwise be. We have seen beautiful crops of spring wheat grown after corn or potatoes that had been well manured, and after the crops were gathered late in the fall, well and deeply plowed for the spring crop. A rich dry seed bed was thus ready for the seed wheat early in the season, long before a plowing could have taken place that would have left the soil in a fit condition for a crop. It is as necessary to secure good seed for spring, as for winter or fall sowing, and the preparation of it by brining and liming, should never in any instance be omitted.

RUFFIN'S ESSAY ON CALCAREOUS MANURES.

We noticed in our last, the reception of the third edition of this valuable work from the respected author; but we cannot resist the desire to again call the attention of our readers to it, in the hope that they will secure a copy for themselves, as it is printed in a form that allows of its transmission by mail. We prize this work highly, as independent of the great truths it discloses in regard to the use of calcareous manures, it stands as the first original American work on agricultural science, and one which has rarely been equaled in the value of its suggestions in any country. Its publication constitutes a new era in southern agriculture; the immense marl beds, as well as those of green sand, that underlie so large a proportion of the tide waters of the south, have been brought into profitable notice and use by it; and the importance of calcareous manures established beyond doubt. Dr. Dana has done for muck, or vegetable matter, what Mr. Ruffin has done for lime; and as Americans, we feel proud that the two best works that have yet appeared on these subjects are from the pens of our own citizens. We are glad that they are both receiving so much notice; and heartily concur in the propositions that have been made in various quarters, to have them extensively used as minor premiums, by our Agricultural Societies.

SEED STORES AND AG. REPOSITORIES.

Farmers, encourage your seed stores and repositories of Agricultural implements by visiting and giving them your support. The difference of profit between crops grown from seeds of prime quality, or from inferior ones, is not duly estimated. So with Implements. The ease of working, the rapidity of execution, and the saving of time in using good implements, should induce every farmer, when purchase is necessary, to provide himself with the best. So with the dairyman. How much hard labor might he save his wife or his dairymaids, if he would substitute some of the modern implements for churning and working over his butter, for the old fashioned ones he continues to employ. We are aware that complaints are made of seedsmen, and perhaps in a few instances justly, that deceptions are used, that the article sold is not always what it is said to be, that old seeds or damaged ones are mixed with the new, &c. &c. And we are also aware that in nine cases out of ten, where seeds turn out differently from what was expected, or fail to vegetate, the fault is with the purchaser rather than the vender. Complaints of the kind named, have been much less frequent of late than formerly; and if farmers will only be careful to mark those who wilfully deceive in this matter, there will soon be an end of collusion. The greatest fault found with our Agricultural implements, and the defect is urged against nearly all of them, is, that they are too slightly made to endure the labor expected from them. They are consequently liable to break, or get out of repair; circumstances not likely to increase the good humor of the farmer when such accidents occur, as they are most likely to do, at the most hurrying times. We think our mechanics in general, would do well to take this matter of strength and firmness in their construction into consideration, as going far to establish the reputation of the implements made by them.

AGRICULTURAL PAPERS IN NEW-ENGLAND.

Maine.—The Eastern Farmer, published at Portland during the last year, and edited by F. O. J. Smith, Esq., has been united with the *Maine Farmer* and Mechanic's Advocate at Winthrop, edited by Dr. E. Holmes. The consolidated paper is to be edited by Messrs. H. and S., and to be published at Portland and Winthrop. It is a large and well filled folio sheet at $2,00 a year. The *Maine Cultivator*, a weekly folio sheet, is continued at Hallowell, by Mr. Lincoln; and the Gospel Banner, published at Augusta, by Rev. Mr. Drew, devotes a page to Agricultural matters, under the head of "The Plow Boy."

New Hampshire.—In this State, the *Farmer's Monthly Visitor*, conducted by Gov. Hill, is continued at Concord, and is the only Agricultural paper we believe in the State. The new vol. commencing with the present year, is published at the low price of 50 cents.

In Massachusetts, we have, first the *New-England Farmer*, the oldest paper of the kind in the Union. It is now in its 21st year, and has been continued from its commencement in the same form and style, a handsome quarto, weekly at $2,00 a year. It is edited by the Rev. Allen Putnam, under whose superintendence its high reputation has been well sustained. 2. The *Boston Cultivator*, a weekly quarto sheet, by Otis Brewer. 3. The *Massachusetts Plowman*, at Boston, by Wm. Buekminster, Esq., a large folio sheet, weekly. 4. The *Farmer's Journal*, Boston, monthly, at 50 cents, by Mr. S, W. Cole, the former editor of the Yankee Farmer. which was united with the Plowman. 5. The *Berkshire Farmer*, at Pittsfield, by Wm. Bacon, Esq., monthly, at 50 cents a year. 6. The *Farmer's Advocate*, by H. C. Merriam, Esq., editor of the Boston Cultivator for the last year. This is a large and well filled folio, weekly, at $2,50 a year. If the farmers of Massachusetts do not pursue their business in the most approved manner, it will not be because the information necessary is not placed within their reach.

Connecticut has but one Agricultural paper, the *Farme'rs Gazette*, at New-Haven, semi-monthly, 16 pages octavo, at $1,00 a year. Joseph Wood, Editor.

EXTRAORDINARY PIGS.

Our thanks are due Dr. C. for the following account of the pigs fattened by him in 1842. We do not now recollect another instance in which a pig of 20 months has reached 700 lbs.; and the gain on raw apples adds another case in proof of the value of this fruit for feeding pigs. We fully concur with the Dr. that fermented food is to be preferred for fattening swine, and that the less exercise they take, or the more restricted their range, the more rapidly will they take on fat.

To W. Gaylord, Esq.—Your note of the 16th, making some inquiries touching the breed of my hogs, mode and time of fattening, and the kind of food used for this purpose, was duly received. In replying, I fear I shall not be able to communicate such information as will be satisfactory to you on all the points on which you request it.

Of the breed of the two smallest, I know nothing, as I bought them last spring, when about a year old, of a person who has since moved out of the country. I understood, however, from him at the time that they were of an improved breed. They weighed at that time (April) about two hundred pounds each. The largest of my fattened pigs was of a cross between the Berkshire breed and a kind known in this vicinity as the Saratoga breed, from their having first been introduced here from that county. They are entirely white, very handsome, and though rather large boned, keep and fat easier than any breed of hogs I ever saw. I have been informed—how correctly I cannot say—that their true name is the Russia breed.

There was no particular care or pains taken of the one I slaughtered, the first season. He was kept for a boar until about a year old. He was wintered *entirely* on raw apples, principally sour ones; and on this food, gained from 160 lbs., which he weighed in November, to 300 lbs., which he reached in April. He was then altered, and put up in a pen with the other two hogs, where they remained until they were killed in the latter part of January last. They were from 19 to 20 months old, and weighed respectively—704 lbs.—578 lbs.—410 lbs.

Their only food, from April to September, was boiled potatoes and buttermilk, mixed and fermented. In September, I mixed into this food ten bushels of ground peas; after this, until they were killed, their food consisted of barley meal, mixed with milk and water, and suffered to stand until sour. Of this they had all they would eat.

Their pen was some 12 by 15 feet, a partition running across the middle, with a door-way, and half of it roofed over. In the covered part was the trough. They were never suffered to run out into a yard, a mode many prefer. I have been many years of opinion that hogs will fat faster and cheaper under a system of close confinement and fermented food, than in any other way. Should you deem the foregoing statements such as would interest the readers of the Cultivator, they are at your service.
W. F. Cooper, M. D.

Kelloggsville, Cayuga co., March, 1843.

Silk Culture.—The Report of the New-England Silk Convention, held at Northampton last autumn, affords the most gratifying evidence of the progress of the silk culture in various sections of our country. Mr. D. B. Blakesley of Newark in this state, says that he last year raised 300 lbs. first rate cocoons from one and a half acre of mulberries; the whole expense, including rents and every thing, was $42,40. He planted five acres to mulberries last year, and will plant another five acres this spring. The progress in Massachusetts will be shown by the fact, that the bounty paid in that state amounted in 1836, to only $71,37, while in 1842, up to 1st of October, it had risen to $3,351 91. In 1838, the Society at Economy, Pa., raised 1,400 lbs. cocoons—in 1839, 1,800 lbs.—in 1840, 2,400 lbs.—in 1841, 4,400 lbs.—in 1842, 5,500 lbs. In connection with this subject, we would invite attention to the circular of Messrs. Haywood & Co., of New-York, given on another page of this paper. Judging, and rightly too, that this business would soon be one of importance, they have turned their attention to it with a view of opening a ready market for the raw silk, and of rendering such assistance as may be in their power to its growers, by furnishing information, eggs, reels, &c., which may be depended upon.

"Credit."—During the last two months, we have noticed no less than *seventy-five* articles, in different papers, copied from the Cultivator, without the proper credit. If the omission to credit, has arisen from carelessness, such negligence ought to be corrected. We have already stricken some thirty papers from our exchange list, on this account, and shall have to cut off still more, unless justice in this respect, is done to the Cultivator.

☞ The last *Spirit of the Times*, brought us a most elegant steel print of Col. Johnson, "the Napoleon of the turf.

THE TIMES.

THAT a singular condition of things is existing in the United States at the present time, is obvious to every one at all acquainted with the affairs of the country. With general health unexampled; with peace uninterrupted; with granaries overflowing; the cry of hard times comes up from every part of our broad country, mingled with complaints, murmurs, and execrations, varied as the causes supposed to produce the evils under which we are suffering. The manufacturer has stopped his spindles, because his sales would hardly procure the oil required by his machinery. The merchant has laid up his ships, because there was no demand for exports, and imports could not be sold. The farmer has stopped his plow, because his granaries are already full, and because his products have fallen so low that the prices will not pay the cost of production. There are thousands of respectable farmers in our country, whose crops the last year were good, that find themselves on the wrong side of the balance sheet, after wages, taxes, and wear and tear are deducted. These are facts, and they are serious ones; the causes of this state of things are not so obvious. The evil all admit, the remedy varies with the individual; but almost every one has his panacea for all the ills of the body politic. With some, the enactments of high protective tariffs would form an infallible cure; while others deem their total repeal all that is needed to insure prosperity. There are some who consider a national bank indispensable to relief; while others argue most vehemently that all our troubles may be traced to the existence in past years of such an institution. There are those who assert that all is wrong because the state banks will not "shell out;" while there are others who argufy as earnestly, that "shelling out" too liberally lies at the root of all our troubles. Who shall decide, when political economists so widely disagree?

But while there is such a difference of opinion as to some of the causes that have operated so unfavorably, there are others respecting which it would seem there can be little room for dissension. Such a cause, in our view, is the general state of indebtedness, in which the individual, the states, and the government are found. There is no need of quarreling about the cause of this indebtedness now; though we believe there is a fearful responsibility resting on those through whose management this state of things exists. The debt exists, the farmer owes, the mechanic owes, professional men owe, states are bankrupt, and the general government has not escaped the shame or the crime of a debt. "Brethren," said a preacher one day in our hearing, when discoursing on that knottiest of metaphysical subjects, the introduction of sin into the universe—"Brethren, there is no use in spending our time in conjectures as to the manner in which sin came into the universe; it is here, and it is our business to go to work in earnest, and get it out as soon as possible." So with our debts; they are contracted, they are here, and wrangling about them is of no use; the only way is to go to work with steady nerves and strong hands and wipe them out as soon as we can, and then look out for the future.

The great cause of the distress now existing in our country, is to be found in our indebtedness. This is the millstone that hangs on the neck of honest industry, the incubus that chills the life blood and stifles the breath of enterprise. Prices are low, and they must be low in a healthy state of things, while the world remains in its present condition. The millions of Europe have converted their swords into plow shares, and instead of slaughtering one another, are employed in sowing and reaping. As producers multiply, prices must decline, industry will be turned into new channels, and as these are occupied the same results will ensue; the prices of labor will fall, and all things will gradually find their true level. All will see that this would be well enough, were it not for the fact that too many of us owe. And the debts too were contracted in times when the products of the soil were at least 100 per cent higher than they now are. Here is the true secret of the existing distress, the cause of the hard times of which we complain. We must grow two bushels of wheat, or fatten two pigs, or shear two sheep, where it was expected one would be sufficient; for though we might live, and live well, on the products of our farms at present prices, it requires double the labor to pay our debts it formerly did, or would at the time they were contracted.

But it is said by some, there is no necessity of hard times, simply because farm products have declined in price; that there is no necessary connection between low prices in grain, and general distress in a country. This might be true, were it not for our indebtedness; but now the effect is as sure to follow the cause, as night is to succeed day. If the merchant, or the mechanic, expects the farmer to purchase as much of them as formerly, they must be mistaken. Nothing short of the grossest infatuation could induce him to continue his purchases, while his means have lessened one-half. No, the old coat must be neatly brushed and mended; the number of dresses must be reduced to suit the times; the order for the new carriage is countermanded; and the sofa and chairs about which there had been some talk, it is mutually agreed to forget. Thus when the farmer is forced to retrench, the act is felt in every quarter, for he is the great producer, and the great purchaser of the country.

We sometimes hear bitter complaints against the banks, that they do not throw out more paper, that they do not make money more plenty. This is all idle. The banks are able and willing to lend; the difficulty is to find safe borrowers. The Report of the Bank Commissioners of this state, discloses the singular fact, that the specie in their vaults, actually exceeds the notes of the banks in circulation. In what branch of industry is there any inducement found at this time to draw money from banks? Money literally goes a begging in our cities, and for profitable investments can be had at the lowest rates. Trade is stagnant because the supply exceeds the demand; prices have fallen to the specie standard; and when by patient toil and persevering industry, the producers of wealth have paid their debts and the debts of the states, which must ultimately come from their earnings, times in which less distress will be felt, may be expected. And the times will improve exactly in proportion as this point of freedom from indebtedness is approached. When the springs of industry are freed from what now presses them down with the weight of a mountain, their elastic energy will be seen, and relief in the exact ratio of their expansion, will be the result. There is not the least use or necessity for the farmer's being disheartened. The times may demand prudence and economy; they certainly require energy and industry. The circle of prices do not yet correspond; but when once this point is reached, and matters are fast tending to that point, the man who is free from debt, will encounter no trouble whatever. It is said that bought wit is the best, if not bought too dear. A terrible price this country has paid for the lessons in political economy we have received within a few years past. It remains to be seen, by the use which we make of them, whether the price is too great; but unless we are willing to forget that dreams are not realities; that shadows are not substance; that permanent prosperity cannot be based on bubbles, the times through which we are passing will convey to us no lessons of lasting utility.

AGRICULTURAL ADDRESSES.

WE have before us the Address of Mr. Colman, delivered before the Monroe Ag. Soc., Oct. 26, 1842; an Address before the Cayuga Ag. Soc., January 10th, 1843, by H. S. Randall, Esq.; and the Address before the Clinton co. Ag. Soc., October 25, 1842, by Winslow C. Watson, Esq.

The address of Mr. Watson, is a well timed and powerful appeal to the farmers of Clinton, in which the duties and obligations of the farmer are well delineated, and which abounds in truths which should be well and deeply pondered by every tiller of the soil.

It is unnecessary for us to say that the address of Mr. Randall, is of a very high order. Clothed in his graceful, and sometimes flowery style, the most ordinary topics assume additional interest; and the listener forgets that the talk of the speaker is only of cattle, pigs, or manures. His remarks on the differences between the English and American methods of farming, and the natural causes for such a result, are correct and conclusive. After pointing out some of these causes, such as the different amount of land cultivated, the variation of climate, &c. he adds:—"Another cardinal distinction must exist between the agricultural practices of England and the United States, growing out of the opposite relations which land and labor, stand in to each other, in the two countries. In England, it is the land which requires the great outlay of capital; the labor is comparatively nothing. In our country, the case is precisely reversed; land is cheap, and in many sections, it is to be bought at less than the annual rent of the same quantity of land in England. It is the object then, speaking in general terms, of English agriculture, to obtain the greatest product from a given amount of land—of American, to obtain the greatest product from a given amount of labor."

Mr. Randall's exposition of the prevalent faults in our agriculture, is severe; but no one can deny its truth or necessity. That the most barbarous and indefensible practices do exist among farmers, or at least many of them, is apparent to the most careless observer; and it is only by pointing them out in the deserved language of censure, that we may hope for their correction. His remarks on rotation in crops, on the application of manures, and the cultivation of grain and roots, will commend themselves to the reader. Particularly happy we consider that part of the address, in which he so eloquently urges farmers to be true to themselves, their children, and the country. Mr. Randall is a great admirer, as well as a good judge of animals, and his judicious observations on these, and the necessity and means of improvement, show he has lost none of his enthusiasm in that good cause.

We can assure Mr. Colman, that notwithstanding his implied intimation in his introductory note, that some of his hearers might fancy they remembered Lot's wife, if he will only furnish them with such matter, and in such a manner, they will not stop to ask whether what they hear, are the "same words he said last Sunday." The extended limits of Mr. Colman's address, has enabled him to introduce into it many subjects of great interest, not usually included in such addresses, but which are worthy of a place whenever a suitable opportunity offers for their presentation. We do not know when we have read a paper of this kind with more interest, or one which we should be more happy to have placed in the family of every farmer. His pictures of domestic economy are so complete and life-like, and he holds up the "mirror to nature" with such truth, that we are confident some of hearers, if not many of them, must have exclaimed with Moliere's cook, "as sure as I am a sinner, he means me." His remarks on neatness and good order in farming, in contrast with that slovenly disorderly method unfortunately too common, will not be read without approval. We have no patience with that class of men, who, when you urge upon them any improvement; any thing which will add to their comfort or convenience, which will add to the appearance of their dwellings or their farms, meet you with a cold "*cant,*" instead of a hearty "I'll try." The plea of want of time arises from the fact that nothing is done at the time it should be; for nothing is more plain than that work done at the proper period lessens the labor in an astonishing degree. Mr. Colman has placed these matters in a strong light, and one which cannot fail to produce a salutary effect. Nothing is more true than that much of the happiness of life arises from little things, things which, insulated from others, would scarcely be worth notice, but which in their connection, go to form a vast aggregate. The improvement of farms is a topic often dwelt upon; the improvement of the farmer himself, is too commonly overlooked. Let every one who can, procure Mr. Colman's address, and give it a careful reading, and if they do not rise from the perusal wiser men, and better informed as to their agricultural, economical, and social duties, we shall be much mistaken as to the result.

PORK AND LARD OIL.

OF all the new manufactures introduced into the country, there is none which has gone ahead with such a "perfect rush," (to use a favorite western phrase,) as the production of oil from lard, and we know of none which promises more immediately beneficial results. In the great western valley, manufactories are springing up at all the principal points, such as Cincinnati, Louisville, Nashville, St. Louis, Pittsburg, Cleveland, Chicago, Detroit, &c., and two have already been established at Rochester in this state. Already the principal manufacturers count their barrels of oil by tens of thousands, and there is quite as much truth as poetry in the sign of a manufacturer at Pittsburg, over whose door is the representation of two mammoth porkers in the act of devouring a whale.

During the present year, about 245,000 hogs have been killed at Cincinnati; and the number slaughtered at other places has considerably increased. Of the number killed at Cincinnati, about 80,000, according to the most authentic information, have, with the exception of the hams, which are pickled and preserved, been converted into lard at once. Formerly, it was very difficult to try hogs in bulk into lard, without burning or otherwise injuring it so as to make an inferior article; but now, steam has been called to the aid of the manufacturer, and every particle of fat is separated from the meat and the bones, with perfect certainty and ease. A large tub with a double bottom is prepared, the upper one some inches above the other. Into the tub, the hog with the exception of the hams is put, the cover secured, and the steam let in. The fat and the meat fall from the bones, and the lard pours through small holes in the upper bottom, into the space between them, from whence it is drawn for straining and packing. The quantity of lard yielded, where the whole hog is treated for it, will of course depend on the fatness of the animal. It is found by experience, that hogs weighing from 300 to 400 lbs. are the best for trying; the quantity of lard, when well fed, considerably exceeding in proportion that of smaller ones. The per cent, where the hog with the exception of the ham is used, varies from 55 to 65, and some very well fed, and of the China and Berkshire breed, have reached 70. It has been ascertained that where the whole hog is used, the lard contains more oil and less stearine than that made from the leaf or rough fat, and it was not so well adapted for keeping or for transportation as that. This obstacle has been removed by taking from the lard made in this way, about 40 per cent of oil, which leaves the lard of the proper consistency for packing, and of a superior quality.

Some of the manufacturers of lard from the hog, have adopted the practice of skinning the animal before rendering into lard. In this method there is no waste of lard, as all the fat adhering to the skin, is separated from it by a steel scraper, easily. It is then converted into leather, which is excellent for various purposes, such as saddle and harness making, book binding, &c. Where the lard is made by steam, the bones are left in a fine condition for conversion into animal charcoal, which is worth some 2 or 3 cents per pound. It is probable that this substance will prove of as much service, and be in as great demand for the clarification of corn stalk sugar in the west, as is the same material in France, for the making of beet sugar.

HARTFORD CO. AG. TRANSACTIONS FOR 1842.

THE "Transactions" of this spirited Society are before us in the shape of a beautifully printed pamplet of some 90 pages, containing the Address before the Soc. by Mr. Huntington; the Reports of the several committees; officers of the Society for 1843, &c. &c. We heartily approve of this method of perpetuating the proceedings of such societies, by embodying them in a pamplet form, as valuable for future reference. We have already mentioned the proceedings of the Society, as deserving of high praise, and have only room to add, that in looking over the Reports we found the following:—"Two extraordinary fleeces of fine wool, unwashed, weighing 16 pounds each, were exhibited by Edward Woodruff of Farmington." We are not aware how much would be lost in washing their fleeces, but unless greater than we imagine, they will, it is believed, not be easily exceeded in the country.

DICTIONARY OF TERMS USED IN
Agriculture and its kindred Sciences.

JAUNDICE.—This is a disease which attacks horses and cattle, and sometimes becomes quite intractable and dangerous. It is usually occasioned by some obstruction in the ducts or tubes which convey the bile from the liver to the intestines. These obstructions are generally calculi or *gall stones*, which in the ox or cow, sometimes accumulate in great numbers; although the disease sometimes arises from an increased flow or altered quality of the bile, while none of these obstructions are present. The disease is easily detected by the yellowness of the eyes and mouth, and of the skin generally; the urine is high colored, and the appetite is impaired. From the color of the urine and the skin, the disease is frequently termed the *Yellows*. Purgatives will be necessary, but in the case of the horse, strong ones are dangerous. Two drams of aloes, and one of calomel, given twice a day, will be as much as can be at all times administered in safety. If the system is inflamed or feverish, bleeding must be resorted to, and there are few cases of jaundice in which it will not be useful. Thin gruel, or slightly warmed water, is best for drink, and carrots or other green food will be beneficial mixed with their ordinary food. In the ox or cow, the disease is more difficult of management, and more frequently proves fatal, than in the horse. Bleeding and purgatives are required; but for the purgative, Epsom salts are to be preferred to any other. Some have recommended as a certain cure for this disease, when taken in season, two ounces of flour of mustard, mixed up with some liquid, and given twice in twenty-four hours. As all animals are more liable to be attacked in the spring, than at other times, it proves that green food of some kind is essential to their health, and it is probable that roots will be one of the most effectual preventives of this disease.

JUICES OF PLANTS.—The proper juice of plants, that which is essential to their growth and nutrition, is the sap, after it has undergone the changes consequent on being received into the circulation of the plant. It seems to be elaborated from the sap, by the vital power of the plant, and hence varies much in different plants. In some it is sweet, as the sugar maple; in others, acrid or corrosive, as in the wild parsnep; in others, narcotic, as the poppy, belladonna, &c.; in others, aromatic, as in cinnamon. The color of the proper juices of plants, varies as much as their qualities. In the milkweed it is white, in the periwinkle green, in the celandine yellow, in bloodroot or logwood it is red, and in others clear and pure. The medicinal qualities of plants principally reside in their proper juices, of which the balsam and turpentine of the fir and pine, are familiar instances. That there is a proper circulation of the juices of plants, as the result of their organization, although long doubted, seems now to be generally admitted. Indeed, in some plants this current is clearly seen by the microscope, as is exhibited in the plates of Roget's Vegetable Physiology. Such a function in some form, seems necessary, or plants would be unable to free themselves from unnecessary or adventitious matters which are taken up by the sap, as it is clear they do by the process of excretion. Prof. Knight's account of this circulation and its results, is in substance as follows:—When the seed is planted under favorable conditions, moisture is absorbed, and slightly modified by the cotyledons, is conducted to the radicle, which is then developed. But this fluid in the radicle, mingled with that continually taken up from the soil, ascends to the plumelet, which now expands, and gives the due preparation to the ascending sap, which is returned in its elaborated state to the tubes of the bark. Through this it descends to the root, forming in its progress new bark, and new alburnum, thus completing the circulation.

KIDNEY BEAN.—(*Phaseolus vulgaris.*)—In its native state in India or South America, for it is found in both these places, this plant, of which there are two species and several varieties, is a pole bean, or runner. In cultivation, some varieties lose their disposition to climb, and appear as bush beans, which has caused the bush and runners to be considered as different species. In this country, some variety of this bean is usually cultivated in the field, and for pole and bush beans, no others are known in the garden. In France, the kidney bean, called by the people, '*Haricot*,' from the name of a famous soup made of it, is extensively cultivated; while in England, the Field Bean, (*Vicia faba*,) is the one most commonly grown. There are few substances used as food, that are more nutritive than the bean, or that are better deserving of a place in cultivation. For animals, the horse bean may be preferred, and enormous crops of this pulse are sometimes produced. Instances are given of its reaching 60 bushels per acre. For animals, all beans should be made into meal, and fed with cut hay or straw. In this country, beans are cooked for the table, by being baked or made into soups, and furnish one of the most healthful and nutritious dishes known. In this case, experience corroborates analysis, as the following statement, by the chemist Einhoff, will show:

Nutritive matter of beans compared with other grain:

	Per cent.	*Per bushel.*
Wheat, ...	74	47
Rye, ...	70	39
Barley, ...	65	33
Oats, ...	58	23
Beans, (*V. F.*)	68	45
Peas, ...	75	49
Beans, (*P. V.*)	84	54

The same chemist obtained from 3840 parts each of the *Vicia faba* and *Phaseolus vulgaris*, the following results:

	Horse or Windsor bean.	*Kidney or Garden bean.*
Starch, ...	1312	1805
Albumen, ...	31	851
Mucilage, &c.	1204	799

Both these analyses show the great amount of nutritive matter contained in the bean, particularly the Kidney bean, or *Phaseolus*, and its consequent value as an article of human food.

KILLING ANIMALS.—One great object to be attended to in killing animals, is to free them as perfectly from blood as possible. It makes the flesh better, and lessens the tendency to putrefaction. In England and in the United States, cattle are usually knocked down by a blow on the forehead, which fractures the skull. In Spain, Italy, and Portugal, cattle are killed by a blow from a short sharp knife, immediately behind the base of the horns. This penetrates the spinal marrow, and causes instant death. The bleeding in both cases, must be imperfect, from the sudden suspension of nervous action, although much less so in the first manner than in the last. In consequence of the want of proper bleeding, the beef of the south of Europe, is generally black and bad. The Jews, as a part of their religious ritual, take much care to free the animal from all blood. They butcher cattle by drawing the four feet together, throwing them on their side, drawing the head as far back as possible, and then with a penknife, severing at a blow, all the large blood vessels of the neck. Beef killed in the Jewish mode, is preferred by many, where it can be obtained. There is a most cruel mode of killing practiced by those who furnish the delicate white veal of the London markets. For several days previous to killing, the calf is bled daily, to such an extent as to cause fainting, by which process the red blood is almost exhausted, and but little except a white serous fluid is left. At the time of killing, the calf is suspended by his hind feet, his head is drawn up backwards as far as possible, so that the head as well as the body may be free from blood, and then at a single blow with a knife, the neck is severed, and the little blood remaining is speedily drawn. Butchers, in killing hogs, frequently perform it in a most barbarous and slovenly manner, mangling the throat, and making what are called "bloody pieces," where none are necessary. Man has a right to take the life of animals when required for food, but humanity requires it should always be performed in such a way as to give as little pain as possible.

LAMPAS, or '*lampers*,' as most farmers pronounce it, is a difficulty in the roof or palate of a horse's mouth, which prevents his eating except with pain. In a horse, the palate is crossed transversely by bars, and some of the lower ones, or those adjoining the fore teeth, swell, become inflamed, and if they rise higher than the teeth, which in a young horse, or when he is shedding his teeth, they sometimes will, feeding is impossible. It may also arise at any time from a feverish tendency, but most often when taken up from grass, or when he has been overfed. It is the custom with some, when a horse has the lampas, to burn them out with a hot iron; and nearly every blacksmith's shop is furnished with an instrument of torture for this purpose. This is a most barborous practice, and should never be performed. It tortures the animal to no purpose; and it destroys, by rendering the bars callous and hard, that elasticity and sensibility, so necessary to safety in managing a horse by the bridle. In nine times out of ten the inflammation will subside in a few days of itself, and if it does not, a few mashes, or gentle alterative medicines, will relieve him. If they are severe, a few slight cut or pricks across the bars with a lancet or knife, will cause the inflammation and swelling to subside; but in all operations about the mouth of the horse, care must be taken not to disturb the principal artery or vein of the palate, unless a full bleeding is intended. At times this difficulty of eating arises from either the grinders or tushes endeavoring to make their way through the integument of the jaw. Examination will show whether this is the case, and if so, a cross cut with a penknife will give immediate relief. Young horses, from the shortness of their teeth, are more subject to the lampas than old ones, but those of all ages are liable to the disease.

LARVÆ.—The insect in one of its stages of existance, between the egg and the perfect insect, is called *larvæ*, a word signifying a mask or covering. To the farmer, the larvæ of insects is of most interest from the losses they occasion him while in this transition state. With a very few exceptions, the larvæ appear in the form of a worm, or caterpillar, and in this state commit the most of their depredations. Thus the wire worm, so destructive to grass and grain, is the larvæ of the *Eleater segetis;* the wheat worm is the larvæ of the fly *Cecidomyia tritici;* the worm which is so destructive to bees, is the larvæ of the moth, *Tinea cerella;* the bot, so destructive to horses, is the larvæ of the *Œstrus equi;* the worm which cause the plum and cherry to drop prematurely, is the larvæ of a species of *Curculio;* the cabbage caterpillar, so ruinous to this plant, is the larvæ of the butterfly, *Papilio brassicæ;* the white grain worm, so destructive in granaries, is the larvæ of the *Tinella granella;* the whitish brown insect that is known as the Hessian fly, and is found at the roots of wheat, is the larvæ of the *Cecidomyia destructor;* the worm which is found in the frontal sinuses of the sheep, and which sometimes penetrates to the brain, causing the staggers and death, is the larvæ of the fly called *Œstrus ovi;* the large white grub with a red head, found in our meadows, and which is sometimes most ruinous to them is the larvæ of the *Melolontha vulgaris*, or May bug; and the bacon and cheese skippers, are larvæ of different species of *Musca*.

LEECH, (*Hirudo.*)—An animal belonging to the mollusca, hermaphrodite, and some of the species viviparous. Their principal value arises from their power of sucking blood, hence their common name of *bloodsucker*. Of all the species there are only two employed for medicinal purposes, or are proper for this use; though perhaps all will draw blood in some degree. The numbers used in Europe, are immense, and are principally procured in the south of France, and they form an extensive article of traffic. To the agriculturist, their interest is principally derived from the fact, that to them, is by many attributed the disease called the *bloody murrain*. In dissecting animals that have died with this disease, the leach has been found in several of the viscera, particularly the stomach and liver, and appearances have indicated that the flow of blood from the points where the animal had attached itself, had caused the destruction of the ox or cow. Perhaps too, the fact that animals drinking from muddy pools abounding in leeches, are more frequently attacked than others, may have led to this opinion; but although the leech, from the causes assigned, may be the cause of death, it does not seem probable that the bloody murrain is to be generally attributed to them, as it prevails where no leeches are found. That they are injurious, is, however, a sufficient reason, why farmers should endeavor to secure pure water for the use of their cattle.

LETTUCE, (*Lactuca sativa.*)—This is one of the plants most commonly cultivated for salads in all parts of the world, and more than twenty species of the plant are known. It is sown in the open air in such a manner as to produce successive crops; and it is one of the plants most usually grown in hot beds in the early spring months. Lettuces have been cultivated from the earliest ages, are very conducive to health, and when allowed to head, make the best salad known.

LEGHORN.—This is the name of a manufacture of straw, principally carried on on the banks of the river Arno, in Italy. The variety of wheat cultivated for this purpose in Tuscany, is known as the *Grano marzolano*, a summer wheat with long bearded ears. The seed is sown early, and very thick, and is allowed to stand until the ear is about to shoot forth, when it is pulled, bleached by being spread on the sandy banks of the Arno, the straw between the last joint and the ear selected and assorted, and then sold. This straw is whitened with sulphur, previous to being braided, and also after it is made into the hat. We have seen some hats much resembling the best leghorn, made of the June grass (*Poa pratensis*,) of our meadows, but it is less tough and flexible than the braid made from wheat. It has been attempted to cultivate the leghorn variety of wheat in England, but it failed. Were it an object, it might undoubtedly be made to grow in the United States, as our summers much more resemble those of Italy than those of England.

LICE.—(*Pediculus.*)—There is scarce an animal that does not nourish, under peculiar circumstances, on its skin, hair, wool, or if a bird, among its feathers, some kind of lice. Some even have more than one, as the horse, where one kind lives in the short hair, and another in the mane. The causes are various which are deemed favorable to the production and increase of these parasites. Domestic animals kept dirty and not curried; filthy unwholesome stables; dirt and sweat allowed to accumulate on the skin, or contact with one already infected, are named as causes. But experience shows that lice prefer animals reduced by hunger, disease, or bad food, and they frequently appear after malignant or inveterate diseases have left the animal weak and debilitated. On the horse, they most generally fix on the mane and tail, but if numerous, spread over the whole animal; on the ox, they are found on all parts; they run over the whole body of the sheep, and swarm on every part of the bodies of swine. Animals attacked, rub off the hair, wool, and even the skin, in their annoyance, and fall away rapidly from the abstraction of blood and juices, and the restless state in which they are kept. For the cure of animals infested, some kind of mercurial ointment is most to be depended upon; though there are vegetable washes, such as a decoction of black hellebore, marsh tea, (*Ledum palustre*,) which will kill these vermin. It has been said, where they were not numerous, sifting fine dry sand over the animal, would speedily drive them off. Snuff, or a decoction of tobacco, is also used with success. For cattle, Youatt recommends the common scab ointment of sheep, (one part of strong mercurial ointment and five parts of lard,) as a cure for this disease. If a little of this is well rubbed in, instead of a good deal being spread over the hair, there will be no danger of salivation, and the cure will be speedy. Infected animals should be shut from well ones, both to prevent infection, and the danger of licking where the mercurial ointment has been newly spread. If fowls are provided with a box containing sand, with a considerable portion of ashes, to dust, or roll themselves in, they will not be lousy, or if they become so, such a box will cure them.

MAKING MANURE.—Asa Barton, in the Maine Farmer, says that he converted straw, corn stalks, and potatoe tops, into good manure in fourteen days, in the spring of 1841, only by heaping them together, and mixing unslacked lime with them. He used six casks of lime, and had fifty loads of good manure. The loads were such as farmers carry, a large half cord to the load.

There are cases, in which a little common sense is of more worth than a great deal of calculation.

Original Papers from Contributors.

GUANO AS A MANURE.

Messrs. Editors—This article, now making a considerable noise in the world, and attracting the attention of agriculturists in Europe and America, was first introduced into the United States in 1830. At that time the writer of this article received a barrel of it, and distributed it to many persons, reserving a small portion for his own use. From an ignorance of the proper application of it, probably, it either destroyed every thing on which it was applied, or produced no effect. So far as the writer heard from those to whom he gave it, one or the other of these effects resulted in every case. Since then it has been occasionally introduced in small parcels, but nothing favorable to its high value has as yet resulted from its use in this country, so far as the writer is aware. But it has not been tried with sufficient care and information of its nature; and therefore no judgment of its value can be formed from any experiment made with it in this country. The object of this paper, therefore, is to lay before American agriculturists all the information at present to be had, of its true character, the materials of which it is composed, and the results of experiments made with it in England.

Baron Humboldt first introduced this article to the notice of Europe. He considered guano as the remains of bird's dung, that has accumulated on the shores of certain islands on the coast of South America, Pacific side, between the 13th and 21st degrees of south latitude, from time immemorial. Its composition, according to Volckel, (the most recent analysis,) is as follows:

Urate of ammonia,	9.
Oxalate of ammonia,	10.6
Oxalate of lime,	7.
Phosphate of ammonia,	6.
Phosphate of magnesia and ammonia,	2.6
Sulphate of potash,	5.5
Sulphate of soda,	3.8
Sal ammoniac,	4.2
Phosphate of lime,	14.3
Clay and sand,	4.7
Organic substances not estimated, containing 12 per cent of matter insoluble in water, soluble salts of iron in small quantity, water,	32.3
	100.0

From this analysis, it appears that about one-third of the whole mass of guano is salts, of which ammonia is the base; one-fifth is phosphoric salt, and one-fifth a salt of which lime is the base; and that all the other ingredients, (potash, soda, &c.) are universally considered highly valuable and even necessary ingredients of good soils. But the ammonia, of which so large a portion of guano consists, is the most important of all nutritious salts, on account of the large amount of nitrogen it affords. It is a subject, however, worthy of consideration, whether we cannot obtain all the valuable properties of guano directly from the chemists, in the form of the various salts of which guano is now known to be composed, at less expense than we can guano itself.* A very respectable mercantile house in Baltimore, who have received a moderate quantity of guano for sale, informed the writer that the cost of importation, all charges included, (and including the duty assessed by government of 20 per cent,) was seven cents a pound. This price, it is believed, will effectually prohibit its use in this country, no matter how valuable it may prove to be as a manure; because from two to four hundred weight will be required to the acre, and thus it will cost from $14 to $28 per acre, to manure the ground. But if it cost seven cents to import it, of course it must be sold at eight or ten cents to yield a profit to the importer, and of course it will not be imported unless it yield this profit. It is, however, hoped that there is some mistake as to the cost of importation, because it is well known that the article retails in England, at 20 shillings per hundred weight. Of course the profits of the importers and also of the retailers, are added to the cost of importation; and if all these together amount to only four cents and nine-tenths per pound, it is difficult to conceive how the simple cost of importation into this country should be seven cents.

As to the value of guano as manure, all who have published the results of their experiments in England, concur in the opinion that it is very great. The writer of this has searched the agricultural periodicals of Great Britain, published during the last two years, and has not been able to find a single objection as to its high value. On the contrary, all the writers concur in the opinion that it can be very profitably applied as a manure, when it costs twenty shillings a hundred weight.

The manner of applying it in England, appears to have been various. Some mixed it with pulverized charcoal, some with wood ashes, others with seed wheat, oats, or barley. Some sowed it by itself broadcast, others applied it in the drills, hills, &c. Mixing it with pulverized charcoal in the proportion of one measure of guano to three of charcoal, and sowing it broadcast, seems to the writer to be the best plan, unless a watery solution should be preferred. The quantity of guano applied to each acre, was generally two hundred weight; but several experimenters considered that a larger quantity would have yielded more profitably, and the result of experiment confirmed the opinion. One writer concluded that eight hundred weight might be applied to the acre with advantage; and that if more were applied, it would injure if not destroy the crop.

There is one striking defect in all the reports above referred to—not one of them describe the *kind of soil*, whether stiff, sandy, or otherwise, on which their experiments were made. Perhaps they supposed that simply naming the kind of *crop* grown, would indicate the kind of soil. It might do so in England, but not in this country, where every kind of crop is raised, or at least attempted to be raised, on every kind of soil almost.

The crops to which guano was applied in England, were wheat, rye, barley, oats, turneps, ruta baga, Italian rye grass, clover, hops, and artificial grasses generally. The produce of land manured with it, compared with that on which other manures were applied, was various in comparative amount, but always exceeded that of all other manures. For example, a piece of land was manured with guano at the rate of two cwt. per acre, and another with 18 loads of horse manure per acre, both seeded with barley at the same time. The produce was ten per cent more from guano than from horse manure, and the latter was fifty per cent more costly. Another piece of land was manured, one acre with six cwt. of bone dust, and another with two cwt. of guano, and both seeded in wheat. The product of the bone dust was 36 bushels, that of the guano was 50 bushels one and a half pecks. Another field was divided into four parts, to the first was applied three cwt. per acre of guano, to the second three cwt. of nitrate of soda, to the third twenty tons per acre, of farm yard manure; the fourth was left without manure. The whole was seeded with Italian rye grass, and when harvested, the product was as follows:

Guano yielded,	14 tons,	15 cwt.	26 lbs.
Nitrate of soda,	14 "	13 "	37 "
Farm yard manure,	13 "	2 "	96 "
Without manure,	7 "	0 "	108 "

The above examples are deemed sufficient to afford a fair view of the value ascribed to guano in England, as they may be considered averages of a great number of results. They may be sufficient to induce a *trial* of the article in this country; for we must not forget that many articles that have received the highest commendation in England, have proved *worthless* in this country. It is not very easy to find a reason for this, but it is true nevertheless. In nearly all the experiments with guano, the results were very nearly the same as those of nitrate of soda, and in the very extensive one just above given, it will be seen that the effects of the nitrate of soda were very nearly the same as those of guano. Now so far as I have been informed, the application of nitrate of soda as manure, in this country, proved of no value. A friend informed me a few days since, that he had used it extensively, without the slightest beneficial effect. So it appears that what is good manure in one country, may be perfectly inefficient in another. On this subject, I will trouble you again shortly. Gideon B. Smith.

Baltimore, Feb. 13, 1843.

INDIAN CORN.

Messrs. Editors—My corn crop of last year was not so good as in former years, but being resolved to know the quantity per acre, I measured off half an acre—of course the best I could select midway across the field—and had it husked and measured with care. The product of this half acre, was forty-six bushels and a half, and ten quarts of shelled corn; this gives over 93½ bushels per acre. This corn was grown in a young peach orchard, the trees standing at distances of sixteen feet square, and the corn planted two feet eight inches square, making six rows between the rows of trees. Each tree occupied the space for five hills of corn, which are not counted in the measurement, but if added, would make over one hundred bushels per acre.

Your advice last spring for the planting of Indian corn, if I recollect right, was three feet square, or drilled at 3 feet by 18 inches. This advice I presume was given for the state in which you live, as well as to those living in the same latitude east and west. I have planted corn as close as this, in latitude about 34½° north, and with such success, that I would never increase this distance there. Here I plant closer, but as I have never planted corn north of Mason & Dixon's line, it would be objected to, if I should tell you that I would plant in your latitude, two hills upon the same ground you require for one, notwithstanding the admonitions of your correspondent, W. R. P.

Corn should be planted so as to give a covering to the ground, that will keep in check all other growths, when the corn has attained about one-third its matured height; and the experience of nine years assures me, that the ground on which it grows, cannot be disturbed after this height is attained, till maturity, without injury to the plant.

My reasons for close planting are adduced from practice, and are these: that I get as large ears as when planted wider, more of them, my field is free from weeds, the crop requires less work, and I have a greater amount of fodder for my farm stock.

There is no diminution in the product of seed or fruit, from working a plant till the secretions necessary for the production of seed, are about being deposited in the plant.

Experiment confirms to me, that if the primitive roots, of such corn as I plant, (a variety of gourd seed,) are injured before the lower leaves upon the stalk have lost their succulency, a sucker is produced from the crown of the root; but I have never been able to produce a sucker, by such means as I have tried, after the fourth leaf upon the stalk had lost its softness and became firm, at which time the stalk will have attained about one-third of its matured height. At this stage of growth, I suppose the generant vessels are actively employed; and matter is forming and depositing for seed; but where and how the generant organs are situated in the corn plant, I will not undertake to determine; but I will venture to say, affirmatively, (and this information I presume will not be "supererogatory" to one of your readers,) that they are not to be found, either in the tassel or silk, the tassel being the conduit, and the silk the recipient for the farina.

Before the peach tree comes into full bearing, but little injury arises from disturbing or displacing the radicles with the plow; but after they have come into full bearing, an injury to the roots produces disease in this tree; and if the soil upon which it stands does not contain abundance of food for this plant, the leaves turn yellow, and often, if not always, a number of short sickly looking sprouts make their appearance upon the main stem of the tree or branches; and after this unsuccessful effort of nature to overcome the injury, the tree dies.

By pulling the leaves off the corn plant, (below where the ear is placed upon the stalk,) and while in their succulent state, no seed is made upon the stalk; but if the leaf is permitted to become firm and hard, before it is pulled, little or no diminution takes place in the product of grain. The same thing occurs in the peach tree, the summer growth of leaves being pulled in their succulent state, no fruit is obtained the succeeding year.

Last year I selected two hills of Indian corn, standing two feet six inches apart; the leaves were stripped off the first, it being the outside hill, when grown to their full size, or nearly so, and before they had lost their succulency, pulling one at a time, till I came to where I supposed the shoot for the ear would put forth on the stalk. The result of this experiment, was a large husk without any grain. The other hill was left till the leaves had lost their softness and become hard; pulling one at a time, each as it became hard, till the height of the ear was attained. In this experiment I could perceive no difference in grain, the ear being as full, and as large, as those standing near it, and where the leaves were not disturbed.

These, and other experiments and observations, have induced me to think that the new fibrous roots thrown out from the injured radicle, took up and carried matter for the first wants of a young plant. Whether this matter is the same as the ligneous sap in the more matured plant, I do not now propose to inquire; but if it will bear a comparison with the first and after wants of the animal creation, then we are to infer that the pabulum necessary for the young plant, is somewhat different from that required at a later period of its growth. If it is dissimilar, and I have reason to believe it so, then the plant at an advanced age, may not be in a condition to receive this new sap, and thus cause disease in several ways. The vital principle may be too weak to reject it, and this sap may communicate with the fluids necessary at this matured state of growth, and produce a chemical change in the fluids; or this new product of sappy matter may produce disease by a change in its own constituency, for want of elaboration by the other parts of the plant; or the new succiferous roots with the parent radicle, for want of equiliberate action, may go into decay, and communicate disease in this way to the whole plant, &c. I am aware of many objections to this theory, and possibly the strongest are, that trees are making new wood throughout the summer, and that our fruit trees are making wood and fruit at the same time, and that disease attacks them where the roots are not disturbed by the cultivator of the soil. I would have it borne in mind, that preparation for wood and fruit in perennials, is made the previous year. An orchard standing upon a subsoil of stiff clay, the land therein being plowed, produces no fruit of any consequence the succeeding year; but if the soil in an orchard is light, and will permit the roots to run deeper, so as to be, comparatively with the above case, out of the way of the plow, a tolerable crop may be expected the next year. In orchards that are worked with the plow, after they begin to produce fruit, we find that those standing upon sandy soils are most prolific. The practice of plowing orchards after they have begun to bear full crops of fruit, is objected to by me, as producing the effects above stated—so do I suppose my views to compare with Mr. Comstock's proposed new system—and I might say the injury done to the trees, by cropping the ground necessary for their support, was the cause for the principal part of all their diseases; but as it is not my intention, at present, to adduce any reasoning upon the theory started above, and as I may have something to say about orchards at some future time, I will conclude by saying that I have experiments making for my own satisfaction in regard to this subject. With much respect, your friend,

Lyttleton Physick.

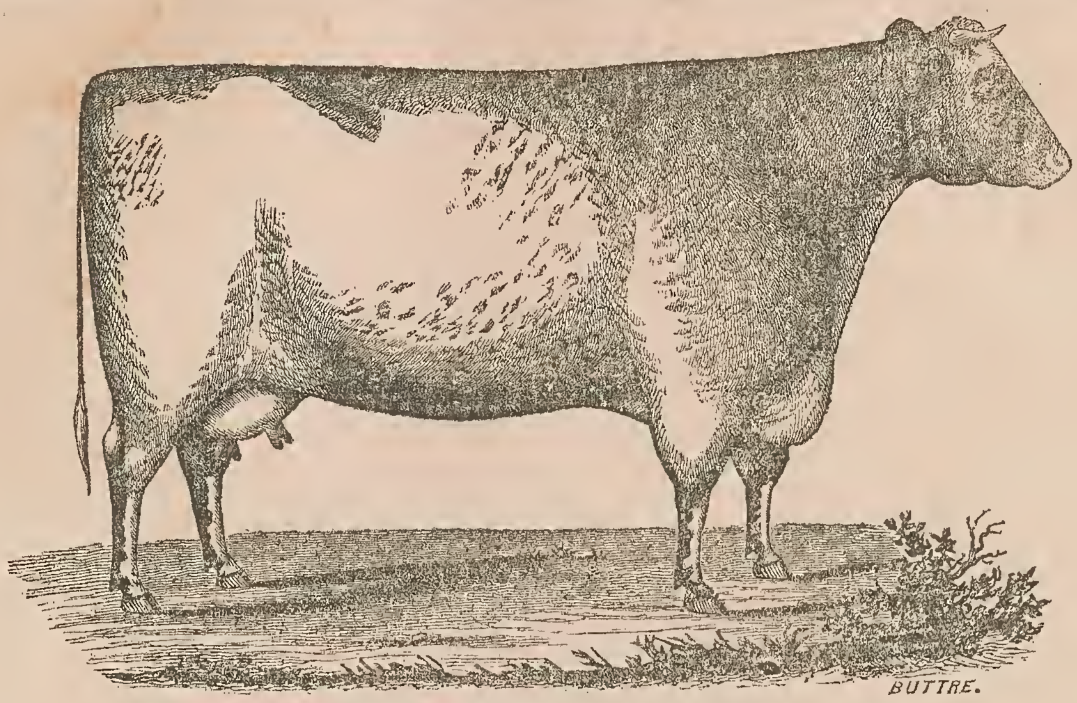
Ararat Farm, Cecil co. Md., Feb. 5, 1843.

"Dig about, and dung it."—This direction was given many centuries ago, and has often been repeated, and perhaps I may say, as often forgotten or neglected. Last summer, I took particular care to apply the above to some young pear trees. One was a graft, of a year's growth, on a stock of several years standing. The ground was loosened for some distance about the tree, perhaps a dozen times during the season. From a single stem, of three feet, the new growth measures 30 feet! The effect on all, was very obvious. G. Butler.

Clinton, N. Y. Feb. 1843.

**Artificial guano* is regularly advertised for sale in the English agricultural papers, at £15 per ton, which is 25 per cent cheaper than the *guano* itself.

AN IMPROVED CULTIVATOR.



IMPROVED SHORT HORN COW "GAZELLE."—(Fig. 32.)

OWNED BY MAJ. J. B. DILL, AUBURN.

To "GAZELLE," was awarded the third premium for the best cow of any breed, at the Fair of the N. Y. S. Ag. Society, held at Albany, Sept. 1842. She was calved in 1838—sired by Charles, 1816—d. Crocus by Romulus, 2563—g. d. Prize by Marlbro, 1189—g. g. d. Tulip by Regent, 516—g. g. g. d. (see Herd Book)—g. g. g. g. d. Primrose by North Star, 459

MESSRS. EDITORS—My object at this time, is to give you and your readers, a general idea of a cultivator which I had made last summer. So far as it was tried, it worked well. Farmers who examined it, pronounced the plan a good one, and our Agricultural Society hoored it with a premium last fall.

The teeth are three, of cast iron, the forward one something like a double mold-board plow, and cutting 12 inches; the back teeth like ordinary plows, one turning the earth to the right, the other to the left, each cutting 8 inches. They are shaped rather flat, so as not to make much of a furrow. The frame is so constructed as to allow a space to be worked of any width from 18 to 36 inches. It is triangular, and when contracted is two feet wide. To describe it minutely, would require a drawing and perhaps take up too much room. If any one should desire it, however, I will give a complete description of the whole implement.

In dressing out the crop the first time, the side teeth are set so as to turn the soil from the row. For the second, they are usually changed, and throw to the row.

The advantages of this over the common cultivator, are, that it works the whole surface, and does it much more thoroughly, especially on rough land. Over the plow, it has the advantage of doing at once going through, what with the plow requires twice; and of leaving land more level, and I think, in better order every way. Not having seen Mr. Langdon's cultivator, I cannot compare the two. Still, I am of opinion that mine possesses two qualities which his does not; that of being easily adapted to different widths, and that of throwing the soil either to or from the row.

The idea occurs to me, that I may be exposing my ignorance in claiming this as a new invention, and that possibly I may be encroaching on some patent. If the former should prove true, I have only to submit to the mortification I would feel, with the best grace I may; if the latter, I hope the party aggrieved will give me an opportunity to repair all damage, before subjecting me to any very severe penalty. Respectfully yours,

Bath, Steuben co., Feb. 18, 1843. GEO. EDWARDS.

CULTURE OF WHEAT.

MESSRS. GAYLORD & TUCKER—The practical farmer should watch the operations of nature; his business leads him constantly to observe her works; he sees her economise all her means, and they are used with a view to certain results. It is the business of the good husbandman to make himself acquainted as much as he can with the laws which govern matter, so as to be able to aid nature in her operations, and by working knowingly and with his eyes open, benefit himself and his fellow men. To obtain this end, it is necessary for the farmer to work with his head, as well as with his hands; to lay hold of all the light placed within his reach, to economise labor, and endeavor to obtain the most he can from his outlay of time and money. It is true all agricultural products are greatly depressed in the market at this time; that there is but little inducement held out for exertion; yet what exertions he makes should be properly directed, and one of the best means of obtaining this end, is for each to gather up all the facts he can, and disseminate them by means of agricultural papers—those eyes to farmers. I have taken an agricultural paper for many years; although there are many things published I consider of little use, yet upon the whole I consider a good paper as indispensable, and I am astonished that all intelligent farmers do not see it for their interest to take one or more.

From the above and other considerations, I feel it my duty to add, if I can, to the general stock. I will therefore give you some account of my practice and observations. In the first place, it would be proper to remark, that a large part of the land in this town, is a good wheat soil; many of our ridges (for the surface is undulating,) appear to be formed, as far as they have been penetrated, of alternate strata of different kinds of soil, which after exposure to the sun and air become very productive. There is every kind of soil, from light sandy to stiff clay loam, and all the different varieties between these extremes, are found frequently in one field. The larger proportion, however, inclines to a clay of different degrees of tenacity; some of the varieties of the latter are considered the strongest and most productive we have for wheat, producing the heaviest yields when properly managed; yet they are most liable to winter kill, and in consequence, to be injured by rust. To avoid these, I consider a body of vegetable matter, in the form of decaying sward or straw manure, which has undergone but little fermentation, harrowed in with the seed, as indispensable on land which has been much worn. For wheat, I plow but twice, breaking up in June and July, as late as possible before haying, which commences commonly in the fore part of July, cross plowing the latter part of the month of August and the fore part of September. Sowing is commonly done between the 10th and 25th of September. If sown earlier, the Hessian fly and a weed called shepherd sprout, is apt to injure it, the latter by overrunning it the next spring, if it obtains a fall growth. If sown later, it does not get growth sufficient to stand the winter. 40 miles west of here, however, they prefer to sow in August. Land should lie, after plowing before sowing, from 10 to 20 days. There are reasons for this, which I have not space here to enumerate; suffice it to say experience has taught it. You will naturally ask, do you let weeds and grass grow up and flourish on your fallow? Certainly not. After breaking up, pass a roller lengthwise of the furrows, shutting all in, if properly plowed; a few days after, pass a heavy harrow the same way; when weeds and grass spring up, I have a large cultivator with wrought teeth, drawn by three horses, which is passed the same way the first time, once in a place; lapping one-half is sufficient; it stirs the ground, and it cuts up the weeds and grass better than the plow; the harrow would be of but little use; next time crossing, repeating this as often as necessary. I kill Canada thistles in this way; if attended to well, few will appear next year, sometimes not any. A cultivator, such as I use, will pass over from 5 to 8 acres in a day; it cannot be used to advantage after a shower, or when the surface is wet, for it will clog up, as we call it, although the land may be in a condition to plow. If, after plowing the last time, and before sowing, weeds and grass spring up which the harrow will not tear up and kill, the cultivator must be used on the furrow, before sowing, passing once in a place; the harrow will take all up after that.

I will now endeavor to give you an account of my method of preparing and applying straw manure. Wheat straw, stacked up carefully in the barn yard, affords a good shelter to stock in winter, and a large part of their living. I feed mine hay twice a day, but they do not need as much hay if they have good bright dry straw to go to. In this way, the straw is all worked down, and a heap of excellent manure is formed, with the droppings and urine, which is mostly collected here, particularly if the stack stands on a low part of the yard. This heap will but slightly ferment, if left untouched until wanted for use. A part of this is taken for spring crops, together with what collects in the remaining part of the yard, not occupied by straw, and the stable manure, and plowed in. After the ground is plowed for the last time, before sowing the wheat, a few loads of this manure, say from 5 to 8 per acre, are drawn and thrown in small heaps about the field on the furrow. When ready for sowing, these are spread evenly as possible, and the harrow passed over lengthwise of the furrows, to smooth down for sowing; the straw may look as if it would clog the harrow, but it will not if the wheat was threshed with a machine, and I never use any other. I have used it dry from the stack without any inconvenience to the harrow, (a large square one, with 36 teeth.) After sowing the wheat, it is harrowed in as usual. I have always put this manure on pieces most liable to be injured by freezing; it has always saved the wheat; in fact I have tried parts of fields where I had always lost my wheat before, with the most perfect success; the straw would be perfectly bright, and the grain plump. The surface water must be drawn off by draining, for if water stands on a piece of ground, nothing will save the wheat. This can be done with a plow on most of our fields; even on land which descends fast, frequent furrows are necessary to conduct off the water rapidly.

I shall now enter on what I suppose is considered debatable ground. I consider rust, in most cases, the effect of winter inj'ing and retarding the growth of wheat. As I have not space to give you all my experience and observations bearing on this point, I will merely state a few facts. The wheat plant is injured by freezing and thawing, and retarded in its growth; when it recovers from this, the season is advanced; if the land is strong, the plant starts with redoubled vigor; the fields look to the unaccustomed eye, rich and promising; in fact, the straw is generally larger and ranker than that of early grain, which comes forward gradually and ripens slowly—this comes on with rapidity, apparently endeavoring to overtake the early grain, and ripen at the same time; a warm growing rain falls, which serves to ripen the early plant, but increases the circulating fluids in the late plant to such an extent, that the sap vessels burst, and the sap flows out, forming a black gummy substance on the outside, and the rents in the straw can be easily seen with the naked eye; depriving the grain of its nourishment, it shrinks, and should be cut as soon as possible. GEO. L. BECKWITH.

West Henrietta, Mon. co. N. Y. Feb. 24, 1843.

COMMENTS ON JAN. NO. OF THE CULTIVATOR.

HAVING finished my volunteer labors in commenting on your paper for the past year, and that too, not only without any censure from your numerous correspondents, but with some commendation from a portion of them, I am encouraged to pursue the same course for 1843; and here commence with your January number. But I must first renew the pledge given in the conclusion of my December comments, to be constantly looking out for symptoms of disapprobation,—a few of which would suffice to stop me, as nothing would mortify me much more than to be deemed either officious or obtrusive.

"The Farmer's and Gardener's Club," is an excellent scheme, well adapted to every town, village, and thickly populated neighborhood. For in such comparatively small and private associations, almost every member would be willing to take part in familiar discussions on agricultural and horticultural topics, each thereby contributing to elicit much useful information: whereas in large societies, very few of the members can ever be tempted to speak.

I have read your brief eulogium on Liebig, with great pleasure, for he justly deserves all you have said of him. He certainly stands at the head, and that too, longo intervallo, of all the chemists whose works have ever yet reached our country; although like all other illustrious men, he has excited the envy of his inferiors, which has produced several most pitiful attempts to injure his scientific fame.

The admirable character of Mr. Coke of Holkam, given by your correspondent Tweedside, furnishes an excellent model for imitation; not that any American farmer could ever expect to acquire such immense agricultural wealth; but thousands upon thousands of us might tread in the footsteps of so noble an example, and pursue similar means of increasing and improving his property.

In the very well written article headed "*Choice of a business for life*," there is the following almost incredible statement:—"Gen. Dearborn stated before the Massachusetts legislature, that he had ascertained by reference to the books of the Custom House, the Banks, the Probate office, and the oldest merchants of Boston, that 97 out of every 100 engaged in trade, and in buying and selling, failed, or died insolvent!" Would it not be of infinite service to our whole country, but especially to our agricultural brethren, if some credible person would make a similar calculation as to the doctors and lawyers in the United States; for it really seems to me as if fully three-fourths of all our youths were crowded by their thoughtless parents, into one or the other of these professions. How this monomania will end it is fearful to anticipate.

Under the head "Agriculture of Virginia," the account given of Mr. Weaver's farming, is, upon the whole, very commendable. But the writer mentions one practice of his, which is sanctioned neither by theory or experience. It is the cultivation of the same field "two successive years in wheat." I have known several persons to try it, and I once did it myself; but in every instance, the second crop was vastly inferior to the first.

The account given by Mr. C. N. Bement, of Hussey's & Baldwin's Corn and Cob Crushers, is such as ought to induce every one who feeds corn to stock, to buy and use one; since there can be no longer, even a shadow of doubt, as to the great economy of the practice. Yet, strange to say, there is probably not one farmer in a thousand, even among those who are thoroughly convinced of their great utility, who has ever bought either of them.

Our extreme tardiness to adopt even what we firmly believe will materially benefit us, is among the most unaccountable things in our nature; and the man who could cure us of it, would be one of the greatest benefactors to our whole class, that ever lived. The advancement of our husbandry, in all its branches, depends as much upon the removal of this obstacle, as it does upon any other thing whatever.

I agree entirely with your correspondent, Mr. M. T. Gehee, in his doubts as to the possibility of Dr. N. B. Cloud's new system of planting and cultivating cotton, accomplishing all that he seems confidently to expect from it. I am perfectly willing to believe that it may be much better than the old, and that he actually gathered from a single acre, treated in his mode, the quantity which he says he did; for *that* he states as a matter of fact, and we are bound to confide in his veracity. But when he expresses the belief that by his method, he can make from 3,000 to 5,000 weight on the same identical land which would yield only from 300 to 500 weight, if cultivated according to the present most approved mode, I feel myself at liberty to call such belief a most extravagant and incredible notion—to say the least of it. True it is, that the same land, after being highly manured, will often produce ten times as much as it did in an utterly impoverished state. But that a mere difference in the modes of culture, could possibly produce so great a difference in the product of two pieces of land, exactly alike in every respect, is something which must actually be seen to be believed. We may search the whole annals of agriculture, without finding a single well authenticated fact to warrant any such expectation. Still I will not positively affirm that such a thing is quite impossible, for I believe nothing to be so, but for a man to bite his own nose off. But Dr. N. B. Cloud, must first make, by his new mode, from 3,000 to 5,000 lbs. of cotton, ascertained by actually weighing the whole quantity, upon land of which the same quantity, cultivated according to the common most approved method, yielded only from 300 to 500 lbs., also ascertained by actually weighing the whole produce. Let him do this, and I will be as ready as any one to pronounce him a benefactor to every cotton grower in the United States; for he would well deserve the title.

I am very sorry that your correspondent Mr. W. H. Sotham, has misunderstood the very brief remarks which I ventured to make on one of his former communications. I certainly did not mean to "*censure*" the opinions which he there advanced; for they were given on a subject of which I knew little or nothing—that is, the various breeds of imported cattle. The few observations which I took the liberty to offer, related solely to *the manner* in which Mr. Sotham expressed his opinion. If *that* was all right, then was I all wrong; and I am very willing now, to cry "peccavi" for it.

Mr. G. B. S. is certainly right as to the identity of the wild and tame turkey; and that they will breed together, is a fact perfectly well known throughout the country where the wild turkey is common. To cross them, improves both the size and the hardihood of the domestic turkey.
COMMENTATOR.

Feb. 17, 1843.

BLACK SEA WHEAT, &c.

MESSRS. EDITORS—For three or more seasons, this variety of wheat has been cultivated in this vicinity, and with universal success. I have seen the grain selected from the most rank and lodged portions of the field, threshed separate, and the yield was about one bushel to the shock; in fact, it has invariably given a good return, from 20 to 40 bushels to the acre. The grain is not as light colored as other varieties, but the berry is always plump; the quality of flour is more harsh, and not as white. The great encouragement to grow this kind of grain with us, is that it never failed of yielding a good return, and in most cases a large crop, not subject to the rust, as other varieties have been here.

FREAKS OF NATURE.—I learned from Erastus Culver, of Wells, that a neighbor of his, Mr. Halsey Goodrich, had two heifers that brought each other to milk at one year old; one of them was milked three consecutive years before she had any offspring. Also, Mr. Joseph Button, now a resident of Chautauque co. N. Y., had a calf estray from his yard at about two weeks old, which accompanied another heifer calf between four and five months old, and by the constant sucking of the younger calf, brought the elder to milk within the space of six weeks.

SIGNS OF THE SEASONS.—On Friday night, 23d of December, we had a slight shock of an earthquake. It happened about midnight; was felt in different parts of this county, from six to ten miles from Lake Champlain. Whether the shock was visible in other parts of the state, I have not learned. It appeared like the rumbling of heavy thunder, which lasted no more than two or three seconds. In conversing with several who heard it, it was more sensibly felt where the dwellings were founded on the rock, by a sudden jar, as if a cannon had been exploded near by.

GRASSHOPPERS were very plenty here in the month of January, after the snow left. They were seen in some parts by hundreds. One man near me, kept several under a tumbler without food two weeks, which fasting did not affect their sprightliness.
S. W. JEWETT.

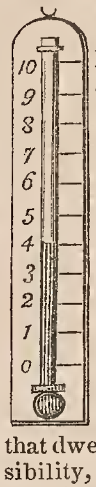
Weybridge, Vt., Feb. 17, 1843.

IMPROVED AGRICULTURAL THERMOMETER.*

HAVING succeeded in procuring the aid of my indispensable friends, Monsieur, the French chemist, and the sage Wampoosum, the Indian doctor, I was highly delighted in being enabled to perform the long intended excursion in pursuit of the precious critique, the truly aqua mirabilissima, for enlarging and otherwise improving the thermometer.

July was chosen as the most suitable month for the excursion; at this season of the year the glowing verdant heat had excited into action the utmost strength of blooming nature. The undertaking is crowned with brilliant success—the much sought for plants have been discovered—the pure nectar has been distilled from the recently discovered rare plants, 4 drops of which added to the original critique, give the world the great desideratum—the agricultural thermometer brought to its greatest possible state of perfection.

The form of the instrument, it will be seen by the annexed figure, is but a little varied from the one given in the last vol. of the Cultivator.



Posthumous fame.
Genius and science made practical.
Genius and science combined.
Scientific agriculture with horticulture.
Emulation awakened.
Profitable experiment.
Book farming commenced.
Industry with a desire to improve.
Unprofitable industry.
Industry with conceited ignorance.
Ignorance with sloth.

The wonderful liquid which the thermometer contains, appears almost to say, "I am the spirit that dwells in the flowers." It possesses such extreme sensibility, that, when strongly excited by recitals of well authenticated acts of good husbandry, it becomes slightly luminous, and in some extraordinary cases, emits brilliant sparks. And when recitals of the antiquated practices of the ignorant and slothful are brought to the test, the critique, or liquid, contracts to about one-half its usual size, accompanied by a disagreeable tremulous sensation and faint hissing.

The experiments now presented are few, as *we* are very much occupied in perfecting a Literary, and also a Political Thermometer, which *I* introduced to the American public, in rather an unfinished state, some twenty years ago. With the aid of my scientific friends, I have great hopes of completing and making them valuable.

The great importance of Thermometers in all the higher branches of science and the arts, is just beginning to be known and fully appreciated. An article was noted in the N. Y. Tribune, of 22d December, 1842, taken from the London News, containing notices of the "Marine" and "Steam" Thermometers, recently invented in England.

Whatever practical benefit England, and other countries, may derive from these new applications of the thermometrical principle, it can hardly be expected that the "marine" and "steam," will ever successfully compete with the "agricultural" thermometer, either in regard to celebrity, or to real, practical utility. Therefore, in respect to the novel applications of the great principle of expansion of liquids by heat, our own nation must still maintain a decided ascendancy. To our own country and times, has been reserved the distinguished honor of making and applying the important discovery, that at least one liquid—the *florum nectar americanum*—is subjected to expansion by *intellectual* heat, and that by tried rules and degrees of measurement, it as clearly indicates the degree of such heat, as the mercury expanded by atmospheric heat, shows its degree and intensity in the centigrade, Farenheit's, or any other thermometer. The analysis of rare plants that led to the improvements, strikingly elucidates the workings of nature, and points to "an inexhaustible field of new combinations and most valuable results." Your readers will find in the particulars of the experiments now to be detailed, new illustrations of the great discovery that the "nectareaus" fluid is expanded by intellectual heat, and may safely be trusted as a proper measure of the "fire of genius."

Having completed my improved thermometer, and wishing to prove its correctness by the severest test, I had two motives for giving its first experiment to the writings of

COMMENTATOR: first, because he had suggested the improvement of making it detect errors, and second, because if it could detect a fault in him, it would be the greatest possible evidence of its infallibility.

On applying it to his article, on page 52, vol. IX, of the Cultivator, the critique rose at once to the tenth degree, and stopped perfectly still, as if conscious of being at home; which confirmed what I had suspected, that that degree indicated the highest merit of a living writer. But gentle reader, you can form no conception of my astonishment, when it began to move irregularly at short distances up and down, like a hound at fault, accompanied with a tremulous thrilling motion, and even a slight hissing sound, the critique beginning at the same time to settle very slowly and with seeming reluctance.

I was upon the point of dashing the instrument to atoms, when my friend the doctor, and wonderful chemist, seizing my arm with all his might, exclaimed—"Begar sair, you must not braky de instrument, ven I have had de grand labor to maky de composition; de instrument cannot lie sair, de composition will always tell de true; Monsieur Commentatair be von man; he may maky some leetil mistake. Suppose you read de article, den you see." I then read the article till I came to the white daisy, when the doctor again exclaimed—"Dere now sair, I will tell you de mistake. Dere be two sort of de vite daisy; von sort be very good for cattle, de oder da will not eat. Monsieur Commentatair aver see only de villain sort—de good, he hav not see." While this explanation was going on, the critique resumed its station at the tenth degree; this satisfied me of the perfect correctness of my thermometer.

Before completing the improved agricultural thermometer, I felt some little misgivings, lest, by increasing its length, it might excite some slight jealousies among the different contributors to the subject; but upon due reflection, I cannot believe that any of those gentlemen, actuated as they must have been, by the deepest and purest feelings of philanthropy, can be affected by any selfish views, and I have the further satisfaction to find that the instrument will not indicate any living merit above the 10th degree. That being the climax, those who reach it can have no fear of being outdone. With these views of the subject, I ventured to apply the instrument to a copy of the address, before the Agricultural and Horticultural societies of New Haven co., Sept. 30, 1840, by

HENRY COLMAN. The various phenomena exhibited, were, as I had anticipated, truly singular. The critique rose suddenly from the bottom of the instrument to the 7th degree, where it made a stop, and becoming slightly luminous, at the same instant threw out some bright scintillations. It then became seemingly quiescent for a moment, and gradually settling down to 6, as if to take a new and fair start, rose with a quick motion, two degrees, to 8, where it stopped as before, going through the same operations, with a little increased brilliancy; it continued this course, alternately settling one and rising two degrees with increased splendor, until it reached the 10th degree.

When the Agricultural Survey of Massachusetts was tested, the critique resumed its former station at 10, attended with glowing heat, and at the same time sending up brilliant light, and many sparks. Mr. Colman makes "the fields his study, and nature his book."

The motion of the railroad cars, when under way, has a tendency to make me drowsy. The other day, while enjoying a pleasant fit of drowsiness in a train of cars, running from this place eastward, I was awoke by a disagreeable hissing and a tremulous sensation of the thermometer, which was snugly stowed away in an inside pocket of my jacket, where it is sure of being found in all my excursions from home. The cause of the hissing, was a dialogue in progress between Mr. William and Mr. Thomas, two of our passengers.

William.—You call me a farmer of the antiquated practice: I know not what you mean sir, by this lingo. I have been a farmer these forty years, and learned the practice from my father, and think I have a good right to know something about farming; yet I do not pretend to know more than my father, for why should we "*undertake to be wiser than our parents.*" I am satisfied with 30 bushels of Indian corn to the acre, and think it barely possible to produce more from the best land. And with regard to all your humbuggery of book farming about *root crops, draining,* &c. &c., it is of a piece with your 100 bushels of corn to the acre.

Thomas.—Why should you be satisfied with 30 bushels of corn to the acre, when the highest authenticated facts will go to prove beyond all cavil, that in many instances, and in various parts of the country, 80, 90, and 100 bushels have been produced on one acre, and in some instances, 130; and Earl Stimson of Saratoga, has raised his 150 bushels from one acre. What you sneeringly term book farming, I must remark, that a little attention to that subject would be of great value to you, not only by enabling you to double your crops, but to learn the vast importance of roots, draining, &c.

ROOTS.—Turnep Townsend, as Lord Townsend, the introducer of the turnep culture into England, was sneeringly called, by the fools that vegetated in the precincts of the court, has added by that root alone, it is estimated, not less than 60 millions annually to the value of English agriculture. The introduction of the potatoe into general use as an article of food, has only equaled the benefit conferred, by the establishment of the field culture of the turnep; and in regard to

DRAINING LAND. Thirty years since, occasional attempts were made to open drains, but they were without system or skill; were principally confined to the worst swamps, and frequently failed to produce the desired effect. The light which geology has thrown on the nature of springs, and the effect which chemistry applied to agriculture, has shown must be the result of stagnant water or wet soils on the cultivated plants, has demonstrated the best method of draining, and its necessity, and rendered fertile millions of acres that were wholly worthless before. Draining, is one of the most valuable of modern agricultural improvements.

While William was exhibiting his intimate acquaintance with antiquated farming, the instrument was noted in the greatest possible confusion, the critique much contracted in size, exhibiting a disagreeable tremulous sensation, with faint hissing, casting a dark shadow on the entire instrument, with the exception of deg. 0, 1, and 2.

When Thomas commenced spreading out his well authenticated facts, the shadow was changed into prismatic colors, which settled over 9, accompanied with some heat.

It is gratifying to learn that those practicing on the antiquated modes, have been much reduced in numbers since the introduction of Agricultural journals, and the wide spread associations to improve Agriculture. William's watch must be without the main spring, and has a weak regulator.

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* See vol. IX, pages 20 and 114.

After withdrawing the instrument a short time, to let the critique settle to the bottom, as it usually does, when not in use, I applied it to the address of Mr. DAVID THOMAS, before the Ag. Society of Cayuga co. in Feb. last. There, the effect was quite different from what it had ever been before, but perfectly satisfactory. It showed no unsteady or vacillating motions, as on other occasions, but moved steadily up to the tenth degree, where it remained stationary; and though it emitted as intense a light as the eye could bear, it was steady, without any sudden flashes or scintillations, and accompanied with great heat. It also sent up a clear luminous appearance from every portion of the tube, indicative of the posthumous benefits resulting naturally from the article, and having allusion also, no doubt, to the intelligence from which it proceeded. But it is clearly proved by the instrument, that however the gentlemen may benefit the public by the continuance of his inestimable favors, and thereby increase their debt of gratitude, he cannot exhibit any additional proof of merit on the score of practical talent. A. OF THE NORTH.

Rome, Feb. 4, 1843.

CAPONISING TURKIES, &c.

MESSRS. EDITORS—The February number of the Cultivator asks the question, by request of M. C., Orange co. N. Y., whether turkeys can be caponised. In reply to the inquiry, I answer in the affirmative. Some operators say they can operate with greater ease and success on the male turkey than upon the male fowl. As their organization is similar, there can be no difference, unless it is in the fact that the testicles of the turkey at the time of operation, are larger and more pendulous; hence the ease of throwing the horse hair over them. Turkies are roaming animals, continually active; caponising lessens this desire in a remarkable degree. Among the breeders of poultry, I frequently hear the complaint that they find great difficulty in fattening their turkies. By emasculating them, and close confinement, with the proper kinds of food, this difficulty must cease. Ducks and geese take on fat faster than either turkies or fowls; this arises from the fact of their quiet habits. I have not attempted to emasculate the male of either of these animals; those who have, inform me that they find great difficulty, in consequence of the testicle being so easily broken by the elevator. The slightest disturbance of their position, ruptures the membrane, impeding the operation.

One great effect in emasculating animals, is, it lessens the desire for the company of the female. Animal orgasm being entirely destroyed in the economy, a change of disposition and habits take place. Quietude and indifference are peculiar characteristics; selfishness becomes a predominant feeling. The gallantry of the cock, that our modern dandies so vainly strive to imitate, is no longer seen, and the capon must be considered the boor of the feathered tribe.

I believe I stated that the most convenient age of the male to operate upon, is as soon as the sex is distinguished. This statement is incorrect; as it was made from the fact that the testicles are easier reached at this early age. But recent observations, founded on physiological evidence, have changed my former views. The proper time is as soon after the cock crows, as convenience will permit. At that period the orgasm is distinctly developed, the age of puberty is passed, the testicles have a rounder form, and the hair can more easily be slipped over them. At the early age spoken of, the testicles are oblong, lying close to the lateral processes of the spine; and one great difficulty in slipping the hair over them at this stage, is, of breaking them, or leaving small portions behind. Should a small portion be allowed to remain, the external character of the male, after a period, becomes as distinctly marked, as if no removal had taken place. I have re-opened some of those I operated on young, and found portions remaining not larger than a small sized pea, yet this was sufficient to cause a full growth of comb and spur, so powerful is the sympathy between these organs. It is a well established fact of physiology, that whenever any part of an organ is destroyed, nature attempts to restore what disease or the knife removed. When two organs exist in the animal economy, performing functions similar, and one is removed or interrupted in its functions, the other performs the office without serious inconvenience to life. An increase of living tissue takes place, in order to capacitate it to the increased duties it has to perform. This is manifest by removing one testicle only. Should the operator but partially succeed, he has lost his labor; a renewal of organs will take place —a connection between the spermatic cord, seminal ducts, and remaining portion of testicle, sufficiently establishes itself as to avail him nothing. The number of my operations the last year, was rising 130; yet of this number there was not more than 80 correctly done. This great number of failures need not discourage any one; care at the time, with the hints already given, must overcome them. Sixty of this number, I purpose keeping until the coming winter, believing that they will then pay a good interest for the expense. The general duration of the growth of the larger breed, is a year or more, and as the general practice among our poultry breeders is to fatten for market their spring and summer chickens, it is obvious they cannot arrive at maturity in that time. A capon 2 years old, at full growth, cooped and fed on food highly carbonaceous, etc., takes on fat astonishingly. A pair of capons, 18 months old, I cooped for 3 weeks, feeding them on corn, corn meal, and potatoes, with gravel and milk, and occasionally ashes; when killed they weighed sixteen pounds, exceeding in fat any species of this tribe I ever saw. They were of the mixed breed. I do not mention the weight as being large—I have seen those that weighed 21½ lbs.—but in order to show the facility they accumulate fat.

The house or coop for fowls or capons to fatten in, should be warm, with a southern aspect; the troughs in number three; one for corn and gravel, one for mush and milk, or potatoes, the other for drink. They should occasionally have ashes given them, that they may keep themselves clean. This is indispensable. A floor to the house is also desirable.

In the January number, is a letter from Mr. Weeks, on the subject of Beehives and Bees. Mr. Weeks' views on the lateness of bees swarming in the spring, as given, are not in accordance with those of Liebig. As Mr. W. speaks of a general defect in 1842, he gives the following views of the case:—" Blossoms this season, (1842,) have yielded so little pollen, that the bees were unable to supply the young with a sufficient quantity of new bread to hasten along the young broods so as to produce swarms, until the season was too far advanced for the bees to form new colonies with safety. It is now believed that bees never feed their young with old bread, at any time when they can traverse the fields." In contradiction to the above remarks, Liebig's are here copied, that those interested in this matter, may draw their own conclusions. Premising his remarks, they are the best that have fallen under my observation. Liebig says:— " In order to produce wax in the manner described, the bees require no pollen, but only honey. I have placed, even in October, bees in an empty hive, and fed them with honey; they soon formed comb, although the weather was such that they could not leave the hive. I cannot, therefore, believe that pollen furnishes food for the bees, but I think they only swallow it in order, by mixing it with honey and water, to prepare the liquid food for the grubs. Besides, bees often starve in April, when their stock of honey is consumed, and when they can obtain in the fields abundance of pollen, but no honey. When pressed by hunger, they tear the nymphæ out of the cells, and gnaw them, in order to support life by the sweet juice they contain. But if in this condition, they are not artificially fed, or if the fields do not soon yield their proper food, they die in the course of a few days. Now if the pollen were really nourishment for bees, they ought to be able to support life on it, mixed with water."

Mulberry Farm, Feb. 20, 1843. J. N. KEELER.

MR. BATES' SHORT HORNS.

MELSRS. GAYLORD & TUCKER—A friend having done me the favor of forwarding to me a number of the *New Farmers' Journal*, published in London, containing an interesting article from the pen of the justly celebrated English breeder of Short Horn Durham Cattle, THOMAS BATES, Esq. of Kirkleavington, Yorkshire, England, on the subject of his tribe of Durhams, and an extra, exhibiting portraits of his celebrated prize bull Duke of Northumberland, and his cow Dutchess 34th,—and entertaining the belief, as I do, that an insertion of a part of his article in the columns of the Cultivator, will prove acceptable to many of your numerous subscribers, I herewith hand you such extracts for the purpose above indicated, and am truly yours, &c. GEO. VAIL.

Troy, March 3, 1843.

Extracts from Mr. Bates' letter to the editor of the New Farmers' Journal:

"SIR—Herewith I send you the pedigree of my short horn bull 'Duke of Northumberland,' as described in the 'Herd Book,' (1,940, in 3d vol.) and which is as follows:

Color roan, calved Oct. 15th, 1835, got by Belvidere, (1,706) dam (Duchess 34th, page 356 of vol 3d of 'Herd Book,') by Belvidere, (1,706,) g. d. (Duchess 29th,) by Second Hubback, (1,423,) gr. g. d. (Duchess 20th,) by the Earl, (1,511,) gr. gr. g. d. (Duchess 8th,) by Marske, (418,) gr. gr. gr. g. d. (Duchess 2d,) by Thelton 1st, (709,) gr. gr. gr. gr. g. d. (Duchess 1st, bred by Mr. Charles Colling,) by Comet, (155.) [This cow was bought by me at Mr. C. Colling's sale, at Thelton, near Darlington, in 1810,] gr. gr. gr. gr. gr. g. d. by Favorite, (252,) gr. gr. gr. gr. gr. gr. g. d. by Daisy Bull, (186.) [This cow was also bought of Mr. C. Colling, by me, in 1804,) gr. gr. gr. gr. gr. gr. gr. g. d. by Favorite, (252,) gr. gr. gr. gr. gr. gr. gr. gr. g. d. by Hubback, (319,) gr. gr. gr. gr. gr. gr. gr. gr. gr. g. d. [bought by Mr. C. Colling, from Stanwix, in 1784, of the late Duke of Northumberland's agent,] by Mr. James Brown's old red bull, (97.)

The *whole* of this family of short horns are *alone* in my possession—having purchased my original cow of this tribe of cattle, of the late Charles Colling, Esq. then of Thelton, near Darlington, thirty-eight years ago; they had been in the possession of Mr. C. Colling, twenty years, who purchased his original cow from Stanwix, of the agent of the late Duke of Northumberland, and Mr. C. Colling named her 'Duchess,' (which name I have continued,) and when the first 'Herd Book,' was prepared, I called the Duchess by Comet, (155,) No. 1. The Duke's dam, Duchess 34th, is the oldest cow I have of the family, and 'The Duke' was her first calf; she has had eight calves, and is (I hope,) again in calf to 'the Duke,' her eldest son. She was calved September 14th, 1832, and in her tenth year, she obtained the highest prize at the Yorkshire Society's late exhibition at York, in August last, as the best cow of any age, the only time she was ever exhibited. Her daughter, Duchess 43d, obtained the premium as the best year-old heifer, at the Oxford meeting of the Royal Agricultural Society of England, in 1839. Her eldest brother, 'The Duke,' obtained at the same meeting, the premium as the best bull of any age, being then three years and eight months old; and the sister in blood to the Duke's dam, obtained at the same time, the premium as the best heifer in calf, though then only a year old; the Duke's own sister was then also in calf. And these same two heifers were awarded the first and second premiums, at the Yorkshire Society's exhibition at Hull, in August, 1841, as the best three years old cows. 'The Duke' also obtained the highest premium as the best two years old bull, at the Yorkshire Society's first exhibition at York, in 1838; and premiums likewise at Stockton and Darlington, the same year, (1838,) as the best bull of any age, and obtained the highest premium as the best bull of any age, at the late York meeting in August last. He never has been exhibited but upon the above five occasions.

"As a proof that this tribe of short horns have imimproved under my care, I may mention that 'Duke of Northumberland's' dam, consumes one-third less food than my first Duchess, (purchased in 1804,) and her milk yields one-third more butter for each quart of milk; and whilst the consumption of food is one-third less, and the milk yields one-third more butter, there is also a greater growth of carcase, and an increased aptitude to fatten. 'Duke's' dam, Duchess 34th, was found with her right leg broken below the knee, when on grass, before she was a year old, and was (in consequence,) confined in the house, and was not able to bear her weight on this leg for near nine months afterwards—thus preventing any improvement for that length of time—and is a cow that never has been indulged at any period—for some years scarce ever tasting a turnep in the winter months—and yet preserving her condition, and breeding regularly.

"It is now above sixty years since I became impressed with the importance of selecting the very best animals to breed from, and for twenty-five years afterwards, lost no opportunity of ascertaining the merits of the various tribes of short horns—and it was *only then* that this could be done, as there is scarce a vestige remaining of the many excellent cattle that were then in existence. I have never used any bull that had not Duchess blood, since I became possessed of this tribe, without perceiving, immediately, the error—except Bevidere (1,706,) and he was the last bull of a long race of well descended short horns, whose blood (in the Princess cow,) went direct from Hubback (319) to Favorite, (252)—as in the Duchess tribe, and in Yarborough's dam (second Hubback's blood, 1,423)—and these are the only *three tribes of short horns* that were so bred as females (and Mr. R. Colling's white bull the only male, being of the Princess family) —and all these three tribes, so bred, are united in the dam of the Duke of Northumberland, and there are no other short horns so bred. The superiority of the stock of Mr. R. Colling's white bull over Favorite's stock, (252,) his sire, was evident to me in 1804—and was admitted by Mr. C. Colling—and I would gladly have then given 100 guineas to have had my first Duchess bulled by him, but I could not obtain it on any terms, and it was 27 years afterwards before I obtained the same blood in Belvidere, (1,706,) the last pure blood of that tribe of short horns. For the last 35 years I have paid little attention to the subject, but the matter was as perfectly fixed in my remembrance as that of the pence or multiplication tables; nor have I had cause to alter any opinion I then formed, and each revolving year has given me additional proofs that the judgment I formed 35 years ago, was correct in every particular. From 1805, when the Tynedale Ward Agricultural Society was formed, till 1812, I exhibited cattle at their Ovingham shows, and my success, even with inferior animals of my breeding, is yet well remembered, but I never showed my first Duchess, nor her son, Ketton 1st; and from 1812, till the York first meeting, in 1838, I never showed any cattle at public exhibitions, (26 years between;) and it was with great reluctance that I again did so, well knowing what I had seen practiced at public meetings; but I consented, at the urgent request of a then stranger, who happened unintentionally to have seen my cattle, when buying horses of my tenants, and I exhibited seven short horns for eight premiums at York, in 1838, and though five premiums were awarded to them, the three best animals were rejected; and then I sent the next year, to the Royal English Agricultural Society's first meeting at Oxford, expecting those placed before them at York, would have again made their appearance at that exhibition; but none of those appeared, and all my three rejected at York, obtained the highest premiums; the fourth (the cow,) I there obtained the premium for, was placed second at York, as a three years old, to one of my own, which got her thigh broke in the field, or she would have gone to Oxford instead of the one I did send.

"I have entered thus into detail, to answer objections, by quoting facts, to prove that this tribe of cattle have not had a recent origin; and, though the best cow then in existence, when I purchased my first Duchess, I have yet improved upon them."

MESSRS. EDITORS—Your correspondent "Commentator," terms me a "drawcansir," in my attack against Liebig's theory of plaster being decomposed by ammonia at atmospheric temperatures. I was aware, when I wrote the article, that such discussion was better calculated for a scientific journal than for an agricultural paper; at least at the present day. Yet I expect the time will soon arrive when agricultural pages will be the proper medium through which to contest scientific errors in the abstract. Commentator must be aware that I merely defended myself against an attack that had repeatedly been made on me. If the butter *in re*, were spread on with too rough a hand, I can only promise my old friend, that in future contests, I will treat with all the *suavitor in modo* the support of truth will permit.

New-York, March 7, 1842. Wm. Partridge.

TOWNLEY'S OBSERVATORY HIVE.

Messrs. Gaylord & Tucker—I send you a description of my Observatory Hive, which possesses, in my estimation, more valuable properties, taken as a whole, than any other that I am acquainted with. It has all the advantages of a common hive, as to capacity, cleanliness, and security against vermin, while at the same time it enables the apiarian to ascertain at all times the state of his colony, and of every individual cell, the progress of the brood, the quantity of provision, the existence and number of royal cells, and the probable period of swarming. It affords every facility for making artificial swarms; the queen may be followed in all her movements, and even in her laying. It is easy to open the hive and lay hold of her at any time. The whole of this observatory hive, is made to turn round on the shoulder of an upright shaft, through which shaft the passage for the bees must of necessity be made, and which does not admit of a bore of above an inch in diameter. As however this narrow perpendicular passage is of no great length, it need not be more than three inches; many thousands of bees will in the course of a few minutes, if necessary, make their egress and ingress through it without incommoding one another. This observatory hive consists of four frames; each frame contains two lights of glass, one on each side, to open at pleasure; each frame is 12 inches in height, and 10 in width, and I can open any particular leaf without interfering with the rest. It is also well adapted for artificial swarming. I have raised twelve queens in this hive at once, and took them out and made artificial swarms from them. The bee master has the whole interior completely under his eye, and at his disposal, and it presents great facilities for making experiments, and for observing the proceedings of the bees, which being prevented from constructing more than one comb, cannot conceal any part of their operations, as in other hives. The whole turns on an upright shaft, and when the observer is satisfied with inspecting one side of the comb, he may wheel the hive round and examine the other, without changing his station. By this mode of proceeding, he may contemplate his favorites at his leisure, without disturbing them, and without the slightest danger of being annoyed by them; for it is true that they become so much accustomed to the opening of the shutters, that the admission of light ceases to disturb them. In short, all the experiments that have ever been made, may be verified by means of this hive, the result found, and new experiments tried. Edward Townley.

New-York, March 4, 1843. 75 Thompson st.

GEOLOGICAL SURVEY—ANALYSIS OF SOILS.

Editors of the Cultivator—At the conclusion of a notice of Mr. Vanuxem's Geological Report, in the March number of your valuable periodical, after speaking favorably of the manner in which that gentleman and myself have performed our duties, you remark that some matters of great practical importance have been overlooked by us. Allusion is then particularly made to the analysis of the various soils of the State, the want of which you seem to think will cause much disappointment to the agriculturists, who have been among the most efficient friends of the survey.

The following statement, which you are at liberty to publish, will, it is believed, at least so far as I am concerned, account for the omission to which you refer.

In the arrangement of the different departments of the survey, it was made my duty to examne the mineralogy of the State, and to execute the analyses of its ores, mineral waters, soils, and other useful products. It was soon found, however, that the territory which New-York embraces was too extensive for the completion of this plan in all its parts during the four or five years allowed for the work. My time was fully occupied in visiting the more important mineral localities, in selecting illustrative specimens, and in the various analyses of ores, mineral waters, limestones, &c. &c. The extent to which these personal examinations were carried in various parts of the State, may perhaps be judged of by the fact, that the total of the journeys made for the purpose is not less than 15,000 miles. To this may be added the preparation of five annual reports of the progress of the work, each of which occupied from two to three months, and of the final report, which, after most of the materials were collected, kept me busily engaged for nearly a whole year.

But as all this may not yet account for the fact that the analysis of our soils was neglected rather than other parts of the work, I may observe that, so early as 1838, my attention was directed to the subject, and I was about making arrangements for an extensive series of experiments. Several difficulties, however, soon presented themselves: one of these related to the proper arrangement and classification of the soils. I examined works on agriculture, and found great discrepancies in regard to these; and it seemed to me that, without some system, I might indeed execute analyses and perform experiments, but they would lack the very thing which was required to make them useful. A few specimens were wanted from different parts of the State, selected with reference to some arrangement by a person practically acquainted with the soils, and who yet had science enough to comprehend fully the objects to be attained by such investigations. These views led to a proposition, made, I think, to the State Agricultural Society, that they would take upon themselves the direction of this part of the survey; but I am not aware that any steps were taken on this subject, which is a matter of regret, as they might have given a proper direction to the observations of the geologists, and the analyses of the chemist.

Another difficulty which presented itself, was in regard to the processes to be adopted in the analysis of soils. Organic chemistry was at the time in a chaotic state. The formula of Davy was confessedly defective, while the new ones proposed in this country appeared to me to be still more objectionable. The discussions which followed among our own chemists, and the able researches of Liebig, Johnson and others, abroad, have thrown some light upon the true modes and objects of such investigations; and yet I am satisfied the part of the survey, the omission of which you so much regret, would, if now undertaken, lead to more useful results than could have been expected at any former period.

It was my original design to divide the report from my department into three parts. First, economical mineralogy; second, descriptive mineralogy; third, geographical mineralogy. The two first of these, already published, grew to the dimensions of an ordinary volume, and I therefore gave up, at least for the present, the publication of the remaining part. It was my intention in this to have given a condensed view of the mineralogy of each county, under an alphabetical arrangement, and to have noticed such facts as might be thought useful to the artist or agriculturist. Should its publication ever be called for by the interest felt in the subject, the detailed examination of soils may then be advantageously introduced. Could not some of our practical agriculturists be induced to co-operate in a work of this kind? Yours, respectfully,

Lewis C. Beck.

New-Brunswick, N. J., March 10, 1843.

CULTURE OF SILK.

Circular to Silk Growers, and to encourage the Culture of Silk.

The subscribers having established themselves as silk commission merchants, with prospects of usefulness and success, will continue to attend particularly to the sale of American raw silk.

From long experience in the silk business, it is expected they may be of service in finding a ready market for American raw silk, and facilitate its production, by giving information of the management and care necessary to insure success.

1. To raise silk of the best quality, it is of the most importance to obtain a good description of silk worm eggs, and not mixed or crossed of different kinds. The Mira-Belle or Italian Yellow Peanut cocoon, and the Large China, White and Yellow, are good, and are being successfully raised in many parts of the States.

2. The eggs should not be permitted to hatch too early, or before the mulberry leaf will be in sufficient supply. June to July has been usually found the right season, and safest to raise the worms healthy.

3. Only feed with fresh, sound, and dry leaves. Cleanliness also is very necessary, and a moderate use of lime has been found of advantage.

4. The cocoonery should be arranged to be easily ventilated and protected from exposure or damage by storms or sudden changes of temperature, and from attacks of vermin.

5. The earlier the cocoons are reeled off, the better will be the silk, and easier to reel. If not reeled immediately, it is necessary to kill the crysalis, and in doing so, the cocoons are liable to be injured by too much drying. It is sufficient and safe to dry them two or three days in the sun, or put in the oven for two or three hours after baking bread.

5. The value of raw silk depends materially upon good, even and round reeling; a great deal of silk is entirely lost by want of practice in doing this properly, or being made of inferior quality. It is best to reel two threads of silk at once, of ten or twelve strands each, and which can be made round by crossing, and particularly not to be flattened or matted together. Use a two yard frame, and put up in 2 oz. hanks.

The worms from 5,000 eggs may be expected to require from 100 to 150 lbs. of leaves before raising. The produce varies very much according to success and description, and each one's experience will alone give further data.

Samples of silk, if sent early, as soon as reeled and ready for market, will have immediate attention, and sales will be made to the greatest advantage. Liberal advances will be made, when required, on consignments of raw silk and cocoons, on receipt and inspection of the quality.

G. M. Haywood & Co., 128 Pearl-street.

P. S. We have made arrangements to offer for sale, on early application, a good description of silk worm eggs, warranted, at 50 cents per 5,000; also, a proper and simple reel, at the cost of 1 lb of silk, by which a person can reel from 1 to 2 lbs. of good silk per day, and in the best way. All persons that raise cocoons are recommended to reel them also, and obtain the largest gain.

New-York, March 15, 1843.

CULTURE OF SILK.

On this subject, we have been favored with the following extract of a letter from Geo. Allen, Esq. of Brockport, a gentleman who has had much experience in the business, to a member of our legislature:

"I consider that there is now but one obstacle to prevent the culture of silk from becoming a regular and certain business—one from which results may be calculated with as much accuracy and confidence as any other branch of agriculture. This formidable obstacle is the liability of the worm to be affected with diseases of a fatal character.

"My experience and observation in the business, have led me to the following conclusions, as a basis for future operations:

"1. That the diseases of the silk worm, above alluded to, are predatory, but not necessarily fatal to the first hatchings in a season, if duly attended to.

"2. That it is contagious, and when introduced among a family of worms in their advanced stage of existence, incurable.

"3. That it is therefore unsafe to feed more than one crop in any apartment during one season.

"4. That the worms designed for supplying eggs or seed should be fed and kept in a building entirely separate from those used for producing cocoons.

"5. That the eggs should be kept in a temperature so low as to prevent them hatching until they are brought out and exposed to a suitable temperature.

"I think I may safely say that my losses, occasioned by diseases of the worms, the two first seasons, exceed one thousand dollars. A part of this loss may indeed be attributed to injudicious and inefficient management on the part of those to whom the business was entrusted; but notwithstanding this, there would have been a fair profit derived from the business, if the rooms had been free from disease.

"The bounty offered by the State affords encouragement to those who are prepared to avail themselves of it, to persevere in the business. I cannot suppose the law will be repealed; certainly I think it should not be, as I view it, in the present depression of other agricultural products, as of great importance to that department of industry; and I think those who encounter all the casualties attending its introduction, should be encouraged by the legislature both of the State and nation."

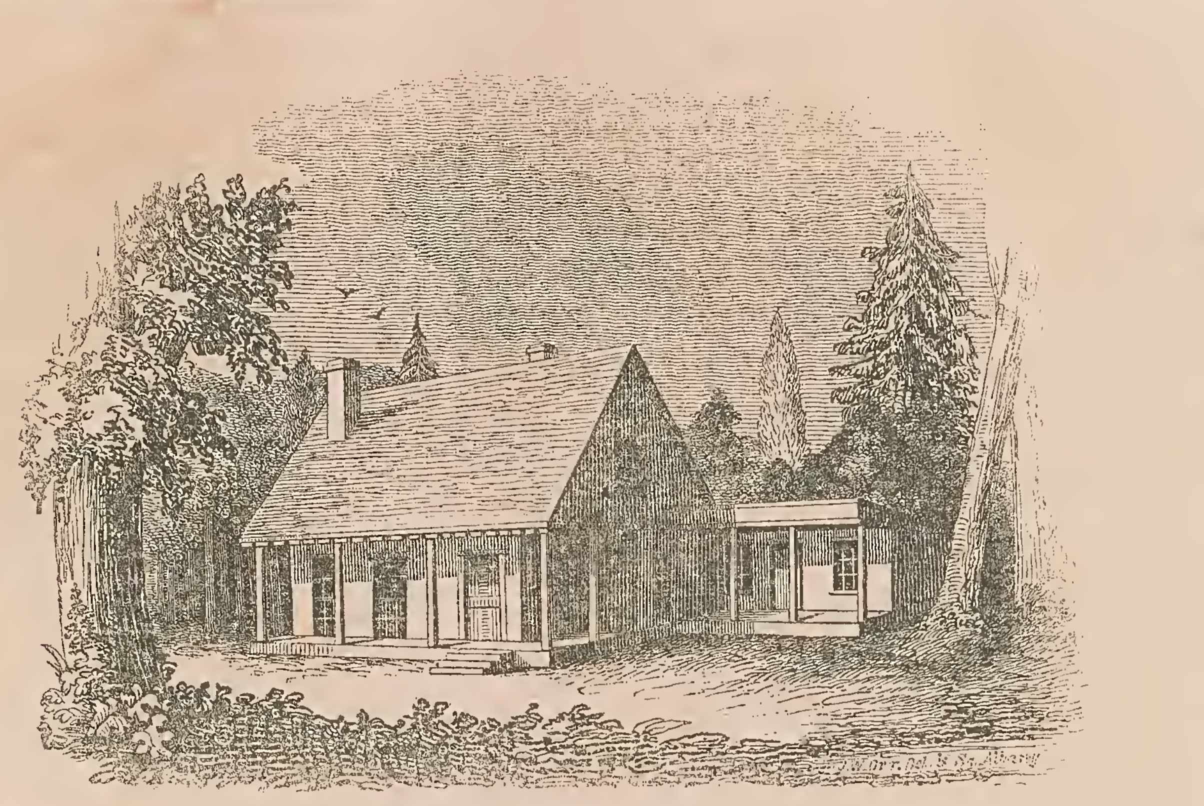
RECLAIMING SWAMPS.

Messrs. Editors of the Cultivator—I have been waiting some time to see the result of an experiment that I tried in reclaiming swamp lands. I will now tell you the manner in which it was done, and you are at liberty to use it as you please. The swamp was low and flat, difficult to be drained, covered with bogs, brush, &c., and as is usual on such lands, muck not deep. After draining sufficiently, grubbing out the brush, cutting the bogs, clearing it off, &c., I commenced dragging it about the last of June, 1840, with what I call a coulter-tooth drag, the teeth being flat and sharp, to cut instead of tear, like the common drag-tooth. As the drag passed over and tore up sticks and other rubbish, I had it raked up and carted off, to give the drag a fair chance to cut up and mellow the surface. That being thoroughly accomplished, I sowed it with buckwheat and seeded with herdsgrass, very thick. I harvested a large crop of buckwheat straw, tolerably filled; the herds grass came up, but remained small until the next spring, when it began to grow, and made a large crop. I mowed it in August, when quite ripe, leaving considerable seed on the ground. Last summer, 1842, it was much thicker on the ground, the quantity somewhat increased, and no appearance of wild grass. I have now no doubt of its remaining the best of meadow. I also commenced washing sand on to adjoining lands, some that was filled with bullrushes, and some that was a hard, retentive clay, which had refused to yield any thing but a very light crop, even when manured. I prepared my furrows and ditches in the fall of the year, to carry the water where I desired. I carried the stream, before it arrived at the meadow, (having considerable fall) through a sand bank, so that with the force of the water and a trifle of labor, I could send any quantity of sand where I desired it. The result is what I anticipated, the destruction of the bullrushes, and in their place an increased quantity of good grass; and on the clay soil, where it was scarcely worth mowing before the sand was washed on, I mowed the past season, as far as the sand had been spread, or even the rily water extended, a fine crop of the best kind of hay. I have tried carting on the sand, which has some beneficial effect, but I think not near equal to what it is when washed on—the water seeming to assist the sand in penetrating the clay. I remain truly your old friend,

Frock & Trowsers.

Claverack, March 20, 1843.

Grafting.—Melt a little beeswax and tallow together, and if it is at hand, stir in a little powdered chalk, and while hot dip in some strips of old calico or cotton cloth. Tear them into strips of such width as may be most convenient to wrap around the stock and scion. Let the stock and scion be covered, so as to prevent the escape of the sap or the introduction of water, and the work is done. This will, I think, be as good as the surgeon's adhesive plaster, or any more complicated or expensive grafting wax. B. B.


J. W. Orr. Del. & Sc. Albany

A FARM HOUSE.—(Fig. 34.)

Messrs. Editors—Having been much interested in the plans of farm houses and cottages, from time to time given in the Cultivator, I have been induced to send you the accompanying plan of a farm cottage, which I projected some three or four years since. It may be thought by some, that a female is stepping out of her department, when she attempts planning houses. I do not think so, inasmuch as females are the parties most concerned in these arrangements.

This plan was predicated on a six year's residence in a farm house, which, perhaps, was as convenient as most houses of that class, but when the "labor saving" principle was applied, it was found very defective. I have observed that in all the plans submitted for your paper, there has been no provision for dairying; without this, I consider a farm house incomplete. From the experience I have had in this matter, I am induced to shrink from the very thought of going out in the hot sun three or four rods from the house, as many times in the day as it is necessary to go to the dairy. If men would oftener consult their wives in these matters, I presume they would in many cases, reap their reward for any fancied compromise of dignity, in additional *peace and quiet*.

In this plan, (figs. 34 and 35,) I have endeavored to combine *utility and beauty*. In my estimation there can be no surer indication of happy independence, than a neat, tasteful cottage, on a well managed farm, and where these are seen, I always presuppose its possessor realizing all that Thomson has so beautifully attached to a philosophical country life:

> "Of men
> The happiest he, who far from public rage,
> Deep in the vale, with a choice few retired,
> Drinks the pure pleasures of the rural life."
>
> * * * * * *
>
> "Here too, dwells simple truth, plain innocence;
> Sound, unbroken youth,
> Health ever blooming, unambitious toil,
> Calm contemplation, and poetic ease."
>
> * * * * * *
>
> This is the life
> Led by primeval ages, uncorrupt,
> When angels dwelt, and God himself, with man."

By a little attention, you will perceive this plan admits of many modifications to suit the circumstances of the builder, without any sacrifice of the main conveniences. It is estimated that a frame house of this description, would cost in this vicinity, about $2,500, probably much less with you.

In the first place, the ground should be selected so as to have drains laid under the surface, from the sinks, dairy, &c. to the piggery or barn yard. My husband suggests that to complete the arrangement of the farm buildings, the barn, carriage house, granary, piggery, &c. should be erected in the rear, so as to form a hollow square, sheltered from the cold winds, and open to the sun.

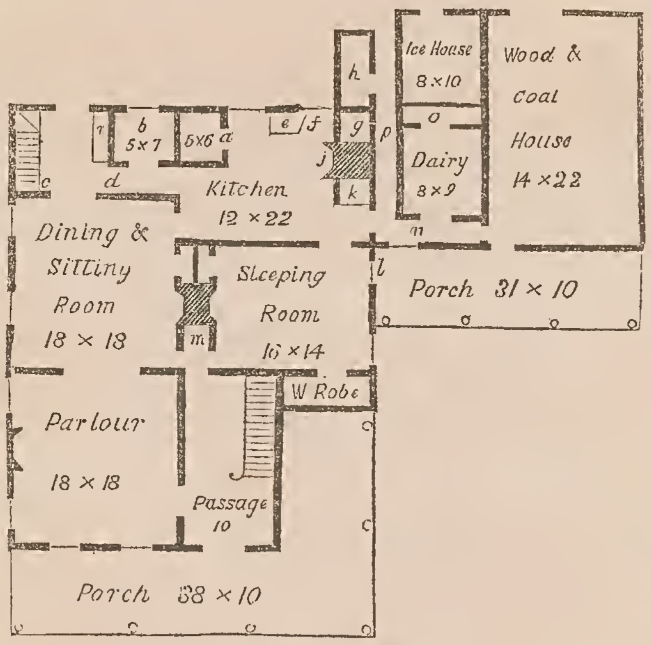
I will now attempt an explanation of that part of the plan which does not explain itself. It was not thought necessary to give a plan of the upper part, as that can be arranged at pleasure. Suffice it to say, it is designed to have twelve feet posts, which will afford room, with such an elevation and width, for good chambers, well lighted.

Explanation of ground plan, fig. 35:

a.—Dark room for dairy utensils, &c.
b.—Store room and pantry.
c. d.—Cellar door, and passage from kitchen.
e. f. g.—Sink, pump, and boiler, with faucet in bathing house for warm water.
h.—Bathing house, with conductor from pump.
i. k.—Fire place and oven.
l.—Window from sleeping room, finished at bottom, for door in warm weather.
m.—Closet for books and papers.
n.—Passage to the out buildings, without going from under cover.
o.—Closet between ice house and dairy, for butter, cream, fresh meat, &c.
p.—Passage for circulation of air, &c.
r.—Portable or stationary sink, to prevent the necessity of farm hands, and others, going to the kitchen to wash.

The dairy should be dug down three or four feet, built up on the sides, and paved with stones, plastered over head, and the walls whitewashed. This part of the building is supposed to have a shed roof, and may be sufficiently elevated to admit of a room immediately over the dairy and ice house, for curing cheese. If a spring of water could be commanded, in such a situation that it could be carried through the buildings by means of pipes, it would be a great advantage.

This plan is supposed to front the east, access being had to the rear by the south end. It is perhaps unnecessary to say any thing about ornamenting the grounds in front, as that is considered a matter of course.



Ground Plan.—(Fig. 35.)

One man to whom this plan was shown, remarked that "such a house might make the women lazy." If any of your numerous readers of the masculine gender, possess any such fears, if they have not already obtained that blessing, (a wife,) may they go to the "*far west*," where girls were never made indolent by convenient houses, but let them by no means go to New England.

Yours respectfully,
Matilda W. Howard.

Zanesville, O., Feb. 14, 1843.

ROTATION OF CROPS

Messrs. Editors—From the account of the proceedings of the N. Y. S. Ag. Society, given in the Cultivator for this month, it appears there was no competition for the premiums offered by the Society for the Essay on Rotation of Crops, and introduction of new agricultural products. This is to be regretted. A judicious rotation or succession of crops on the farm, being considered, ever since the introduction of fallow crops and sown grass into field culture, as one of the most important points of husbandry.

When the immense improvement is taken into view, which the alternate system, as it is called, has brought about in those districts of country in Europe, where it has been established, it cannot fail to be interesting to the American farmer. In these districts, the value of the land has been more than doubled, the farming capital increased in a much higher proportion, and the appearance of the country immensely improved, compared with what it previously was.

It is gratifying to observe that the sowing of grass seeds on farms, has of late become much more general. Intelligent farmers now adopt regular rotations; but the practice is as yet far from general. Many farmers, although they now sow grass seeds, continue the old practice of taking successive crops of grain until their lands become so wasted as to be of little value, and difficult to recover to a profitable state; a course injurious to the public as well as themselves.

Regarding rotations, a view of European practice might afford some instruction and amusement; but the purpose of this communication is to notice some of the opinions and practice of American farmers on this subject, in so far as the subscriber's information extends. The subject is by no means new in America; societies and individuals have been duly sensible of its importance, and earnestly recommended it to attention. In 1819 or 1820, your worthy and much respected predecessor, Jesse Buel, Esq. published a Treatise on Agriculture, which he offered to the Board of Agriculture of this state, with a proposal to print and circulate it, which, tho' approved of by a committee of their number, the board was unable to accede to for want of funds. I supposed Mr. Buel was the author of it, but he told me he was not, and I cannot now recollect the authors name.* This treatise, though it contains one or two erroneous statements, is a work of merit, comprising much interesting information in a small compass. The author's opinion of the alternate system, is in accordance with that of all who have written on the subject within the last fifty or sixty years. It is expressed in the following emphatic terms: "It forms the basis of all successful agriculture. Whatever pains we take, whatever expenses we incur, in collecting instruments of husbandry, in accumulating and applying manures, and tilling the earth, all is to little purpose, unless we superadd a succession of crops adapted to the nature of the soil, to the laws of the climate, and to the physical character and commercial value of the articles raised." The above contains a just view, concisely expressed, of the PRINCIPLES on which all rotations ought to be founded. These principles are general, and applicable to every country, and to all soils and climates.

Regarding the plants of which rotations are composed, he adds: "Never to select for a crop, plants not adapted to the soil, and *never in any case to permit two crops of the same species or kind, to follow each other*." This last, constitutes what is commonly called the alternate system, or sometimes the convertible husbandry, which is now extended over the greater part of Britain, and has long been so in Holland and Belgium, where it had its origin, and was first adopted and established.

About the same time that Mr. Buel's work was published, the Ag. Society of Albany county, offered a premium of forty dollars, for the best essay on rotation of crops, and on manures, and their most profitable application. This premium was awarded to John Nicholson, Esq. of Herkimer co. in this state, author of a very useful compilation entitled "The Farmer's Assistant." This essay contains useful observations, and recommends the alternate system.

The following are specimens of rotations from these two authorities. The author of Mr. Buel's treatise proposes the following for sandy soils:—1st, potatoes—2d, rye, followed by turneps—3d, oats or barley—4th, clover—5th, wheat and turneps—6th, peas, or lupines, or lentils. In the above, there appears nothing exceptionable in principle, except the order, which ought to be, 1st, potatoes—2d, barley—3d, clover—4th, wheat—5th, peas—6th, rye—which is a pretty severe rotation for sandy land. The sowing of turneps on the stubble of the rye and wheat crop, after harvest, without manure, which the author says he has done with success, with one plowing, and sometimes without any plowing, but only harrowing in the seed, to be eaten off by sheep, does not appear to have been followed in practice here, nor are lupines or lentils known here as crops.

For loam, he proposes, 1st, potatoes—2d, wheat—3d, corn—4th, barley—5th, clover—6th, wheat. This I should call a rather too severe rotation, requiring a very rich soil, and more than the ordinary manure of the farm to support it properly.

Mr. Nicholson proposes for all soils free enough for corn—1st, corn, with potatoes, pumpkins and turneps, in alternate drills—2d, spring grain and ruta baga—3d, barley—4th, clover, cut once—5th, clover, cut twice—6th, wheat. He says the practice of planting corn, potatoes and pumpkins, in alternate drills, is common in Pennsylvania, and doubts whether the spring grain could be got off soon enough for putting in ruta baga. It would therefore be preferable to keep out No. 2, and make the rotation a five shift in place of a six; as 1st, corn—2d, barley—3d, clover—4th, pasture—5th, wheat, which is a very good course. For a gravel or sandy soil, he proposes 1st, corn, potatoes, &c.—2d, spring grain, followed by buckwheat, plowed in—3d, wheat, rye or barley—4th, grass—5th, grass. I suspect the spring grain could seldom be harvested in time to sow buckwheat, and get it plowed in, in time to sow wheat.

In Oct. 1823, Mr. Earl Stimson of Galway, delivered an Address before the Ag. Society of Saratoga county, of which he was then the President, in which his system of cropping and management is detailed. This address was afterwards printed by the society. Mr. Stimson's farm and management will bear favorable comparison with those of the best agriculturists in any part of the world; his crops are far, very far above the average of any country. The soil of Mr. Stimson's farm is of a light quality, and by many would be accounted poor. His rotation is as follows:—1st, corn—2d, barley—3d, hay—4th, hay or pasture—5th, wheat; or sometimes, 1st, corn—2d, barley—3d, hay—4th, hay or pasture—5th, peas—6th, wheat. About 12 loads per acre of manure, with a small quantity of plaster, was found sufficient to support this course; although sometimes, as I understood, he extended the pasture in some of his fields, to two or three years. The peculiar and distinguishing feature of Mr. Stimson's management is shallow plowing, by which the manure is constantly retained near the surface of the soil, and thereby always within reach of the crop. This, with his extraordinary correct tillage, is the great secret of his uncommon success. Another peculiarity of Mr. Stimson's management, is in having a very large garden, an acre or two, if I recollect right, cultivated chiefly by the plow, which is never allowed to go deeper in the soil than three inches. On stating my doubt as to the sufficiency of this depth for carrots and other tap rooted plants, he said it was no way detrimental, but the contrary. It is as much as fifteen or sixteen years since I had the pleasure of paying a visit to Mr. Stimson, and I can never forget his kindness and attention in showing me his improvements, and most readily affording me every information regarding his management. A like acknowledgment is due to him by many others as well as myself.

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* The Treatise here referred to, was written by Gen. Armstrong, Secretary of War under Mr. Madison, and now residing in Dutchess county. It was originally published in numbers in the Albany Argus, while Judge Buel was editor, and afterwards in a volume, and also we believe in the Memoirs of the Board of Agriculture. It was re-published, with an Introduction by Judge Buel, in the first series of Harper's School Dist. Library.—Eds.

The next rotation I shall notice, is that of Mr. Woodward, being on the farm which gained the premium of the Onondaga co. Ag. Society, recorded in the Cultivator, vol. IX, p. 68. This farm consists of 225 acres arable; the whole kept under a four shift course of 1st, corn and potatoes—2d, oats or wheat—3d, wheat—4th, clover and pasture—a most profitable course, and well adapted to keep the ground clean and in good order. This rotation is similar to the British four shift course, commonly known as the Norfolk system, but which has been tried in other counties, both in England and Scotland. It has been generally found to require more manure to support it, without deterioration, than the farm can produce, and therefore in most cases has been carried out to a five or six, and even to a seven shift, by continuing the grass for two or three years longer, and with this modification, is now extended over a great part of the island, on all kinds of soil excepting strong clays, where turneps cannot be raised to advantage. The uncommonly large quantity of plaster used by Mr. Woodward, cannot escape observation, and may perhaps contribute greatly to his success. The very large stock of horses, cattle, and sheep, kept on 47 acres of clover, affords sufficient proof of the high condition of the soil. The striking coincidence of these rotations with the Norfolk system, as modified above, induces me to think that with these modifications, as suited to particular soils and situations, there is much probability of their gradually gaining ground, and becoming the leading and favorite systems of the eastern and middle states of the Union. Mr. Stimson's rotation, if we substitute turneps for corn for the fallow crop, is exactly the system that presently prevails over two-thirds of Scotland, and a great part of England. It was my intention to notice one or two more of the rotations recorded in the Cultivator, but this paper is already long enough. I therefore only add, with best wishes for your success, that I am yours, &c. SENEX.

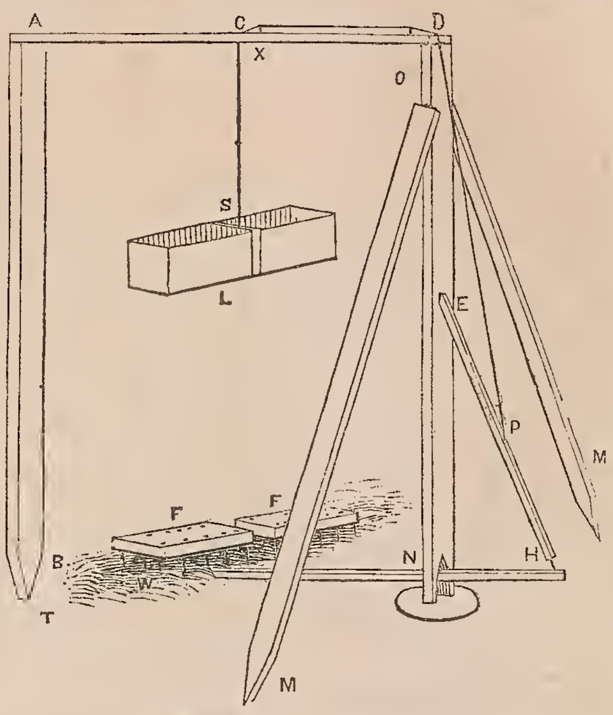
Saratoga co. Feb. 15, 1843.

P. S. Mr. Stimson's Address ought, in my humble opinion, to have a place in the Cultivator. Although nineteen years old, there is none better of the present day. It ought to be preserved.

MOLE TRAP.—(Fig. 36.)

EDITORS OF THE CULTIVATOR—One of your correspondents having made inquiry for a mole trap, I send you a drawing and description of one which I have had in use for several years, and which I have found very effective. The mole which this trap is intended to destroy, is an animal that lives wholly in the ground, moving generally near the surface, and raising the earth over it as it passes along, leaving a little ridge, which is hollow underneath, as if bored with an auger.

T. W. represents the track of a mole. F. F. are two sets of spikes, made like a hetchel. The points of the spikes are sharp, and they are placed directly over and lengthwise the track, but so that the points do not enter the hollow path underneath. The back or board into which the spikes are inserted, is 6 by 3 inches, and 1 inch thick. The spikes are 4½ inches long below the board or back, and two-tenths of an inch in diameter, made of iron wire; 10 in each board. Directly over the spikes, hangs a weight; being a wooden box containing pieces of old iron, and weighing 15 pounds. Its dimensions are 14 inches long, 3½ wide, and 4 deep. Round the middle of the box, at S., is strapped an iron hoop. A wire passes from the hoop at S. to C., (5 inches long,) where it forms a loop which hooks over the end of a wire leading from C. to D. This last wire (C. D.,) is 12 inches long, and two-tenths of an inch in diameter. From D. to P. is another wire 16¾ inches long, hooking on to the wire C. D. at D., and at P. hooking loosely on to a screw which is fastened to the catch E. H. The catch is of wood, 12 inches long, and half an inch square; flattened at the end E., where it is let into a notch in the post. At the end H., it has a sliding pin, by which it may be made longer or shorter, as occasion requires. This pin slides in a hole bored the length of a gimblet, into H. E., and is let into a notch in the spring bar H. W., at H. The spring bar is 18 inches long and three-fourths of an inch square. It moves upon a pivot at N., in a mortice at the bottom of the post. From the pivot to the end of the bar at H., is 4½ inches. The end of the bar at W., is run into the mole's path under the ridge. Some attention is required to adjust the bar properly. If it goes too deep into the mole's path, he will crawl over it and not spring the trap. If it is run into the upper side of the hollow track, the mole will raise it up as he passes along. The effect of raising the bar at W, is to lower the end H.; that lets off the pin at H. The weight then tips up the wire C. D.; slips off at C., and falls upon the spikes, driving them into the mole. In order to give the weight a good purchase upon the wire C. D., the wire passes over the head of a screw at X., standing up from the cross bar two-tenths of an inch. At C., is a mortice through the cross bar, 4½ inches long, and half an inch wide. The cross bar A. D., is 23 inches long and 2 wide, loosely dovetailed at A., into the post A. B. The post A. B. is sharpened at B., and drove into the ground so as to stand firm. It is 30 inches long, 2½ wide, and 1 thick. The other post, D. N., has a wire driven into its upper end, and running up 1 inch into the cross bar at D. This post is 25½ inches long, 2 wide, and 1 thick. It stands upon a flat stone or chip, and is kept firm by the braces O. M., M., which are sharpened and run into the ground at M, and catch into notches in the post at O. The braces are pieces of lath, 32 inches long. To keep the weight perpendicular over the spikes, it is necessary to stick up a couple of stakes on one side of it. If the wind blows hard, four stakes may be necessary.



Mole Trap.—(Fig. 36.)

When the trap is set, it is well to press your foot into the mole's track, on both sides of the trap, so that it may be known whether the animal passes without springing it. The spikes must be set so that they will not hit the bar when they are driven down. They must stand upright; if they lean, they will not be driven into the ground. NOYES DARLING.

New-Haven, Ct. Dec. 12, 1842.

SURFACE COVERING OF WHEAT AND CLOVER.

MESSRS. EDITORS—My continued experiments in the use of pine straw and other litter, as a covering to wheat after sowing, and as an antidote to clover burning out in sandy or any soil, more than realize my expectations. By four years trial, I have now found it always benefits the wheat; sometimes increasing the product one-half at least; and ever guards the clover against the misfortune of burning out in hot dry summers. Several in this region have adopted my plan, and are encouraged by the results to go more fully into it. Light four-tined iron forks, which we procure from Baltimore, greatly facilitate the gathering and loading in the woods, and the spreading the pine straw or leaves over the ground. We take due care to spread it a proper thickness, say not over an inch. I have tried with the happiest results, covering oats and clover sowed together in the spring, and also clover covered the spring or winter following the time sowed. And Irish potatoes here, thus covered, 3, 4, or more inches thick, are greatly increased in product and effectually guarded against drouth.

As to double and tripple crops, these I continue with ever favorable results; instead of rye, I have sowed wheat, buckwheat, and clover, the beginning of August, and all did well. The buckwheat cut first of October, and wheat following summer—and clover then in a fine growing state. The 1st of August, is too early here to sow wheat, other than with the buckwheat, to shade and keep it back. All three essentially benefited by said covering of pine straw, immediately after sowing.

Respectfully Yours,

SIDNEY WELLER.

Brinkleyville, Halifax co. N. C., Feb. 24, 1843.

Veterinary Department.

HORSE DISTEMPER, &c.

"MESSRS. EDITORS—Will you be so kind as to answer the following queries? What is the best remedy for the horse distemper? Symptoms—swelling of the glands of the throat, running at the nose, and refusing to eat or drink. Is there any preventive to the worm which destroys the common locust by boring in the bark and wood? Are there any of the Dorking fowls to be had in your vicinity? And if so, what would be the cost of a pair, and the expense of sending them to this place? What is the best kind of salt to feed stock?

Shoreham, Vt., 1843. E. H. NORTHRUP."

The "distemper" in its commencement is febrile, and during this stage, bleeding is useful. If there is much swelling of the glands and the throat, blistering them should be resorted to at once, or setons may be introduced. The progress of the inflammation of the nose and throat to a favorable crisis, may be hastened by frequently placing hot mashes in the manger, or what is still better, hanging them, when he will permit it, under his nose in a nose bag. For drink, he should have a pail of thin gruel; and he will sometimes drink this if sweetened, when he will not taste it without. In bad cases, it is necessary to drench the animal with gruel to save his life. For food, mashes of malt or bran, moistened hay, fresh grass, roots cut fine, particularly carrots, must be frequently offered.

It is affirmed that washing trees with a liquid made of whale oil soap, will effectually prevent the attacks of the locust borer. Whitewashing has been recommended, as also planting in clumps with other trees. The worm may be killed, or drawn out, with a barbed wire, but the process is slow and tiresome.

The query in relation to the Dorking fowls we cannot answer.

For salt to give cattle, sheep, &c., that which is fine, will be the best. Animals will lick salt if fed to them in lumps, but they are far more apt to waste it when given in this form, than when it is fine. We never use any other than the Onondaga salt of fine and good quality, at present, though we have formerly used other kinds for stock, dairy, and culinary purposes.

CURE FOR FOOT ROT IN SHEEP.

MESSRS. GAYLORD & TUCKER—I take the liberty of sending you the following very simple remedy for foot rot in sheep.

I had occasion to procure a Spanish Merino Buck, a few months ago, from a distant part of the county, and on going into my sheep yard soon afterwards, I found him very lame in two of his feet, so much so as scarcely to be able to walk. I immediately removed him to the barn floor, and on examination found that his lameness was occasioned by that scourge of the Ovine race—the foot rot. I cleansed the hoofs thoroughly with warm soap suds, and fled to my books for a remedy. I soon found in the "Complete Grazier," p. 165, several remedies for this disease, but as I had not at hand the ingredients of which they were composed, I laid aside my books, and took down that "cure all," among farmers, my bottle of spirits turpentine, and with a feather applied it to the parts affected, quite plentifully, twice or three times, in the space of three days, (keeping him upon the dry floor,) when I found that a perfect cure had been effected, and put him with the flock again, and have seen nothing of the lameness since.

Now, Messrs. Editors, this is a simple remedy, and found in every farmer's medicine chest, and I can safely vouch for its efficacy. J. R. SPEED.

Caroline, Tomp. co. March 6, 1843.

MANGE OR ITCH IN SWINE.

THIS is a disease which shows itself by making the animal restless and uneasy, and the eruption or formation of small pimples or watery excrescences, which spread rapidly, and from the rubbing of the animal, the itching or irritation is evidently severe. Pigs of only a few weeks old, appear to suffer most from it, as, if not cured, they will rub hair and skin off, and most of them die. When once introduced on a farm, like the foot rot in sheep, and similar complaints, it seems difficult to get rid of it, as the contagious or infectious matter appears to retain its reproductive powers for a long time. It frequently occasions much loss among the pig growers of England, and instances have occurred in this country, in which farmers have had the greater part of their stock destroyed by it. Brimstone, or sulphur, mixed with lard, and well rubbed in by the hand, may be considered a specific for all such eruptive diseases, and has been found effectual in this. It is also perfectly safe, which cannot be said of all the lotions, washes, &c. prescribed at times for such complaints.

LICE ON FOWLS.—In your Oct. No. I observed some remarks on using sulphur to destroy lice on fowls. This I have tried in former years with entire success. Mixed with Indian meal and water, and fed in the proportion of 1 lb. of sulphur to 2 doz. fowls, in two parcels, a few days apart, I have found that it would soon exterminate the lice, and produce a remarkably healthy and glossy appearance in the fowls. They should at the same time be supplied with proper dusting places. H. A. P.

☞ For notices of Jaundice, Lampas, &c. see p. 63.

The Garden and the Orchard.

CULTURE OF THE GRAPE.

Messrs. Gaylord & Tucker—In further reply to your inquiries and those of your correspondent, in regard to my mode of cultivating the Grape, I offer the following remarks:

The native grapes, particularly the Isabella and Catawba, having changed their character by the ameliorating influence of cultivation, begin to be appreciated by our own citizens, who may be presumed to be less familiar with the good qualities of grapes as an article of food or luxury, than the residents of those countries where they have been known for ages; and yet, even the latter esteem the fruit of these vines highly, and deem it worthy of their patronage. A few years since, the imported Lisbon and Madeira grapes were thought so much superior to our own, that the people of this city could not be induced to use the latter, when the former could be obtained. But the public taste has changed. The Isabella and Catawba grapes, from the improvement which cultivation has produced in their qualities, are now more highly esteemed for the use of the table, by most persons, than the former; indeed, few persons can be prevailed upon to use the "imported foreign grapes," when the improved Isabella or Catawba can be procured in our markets. This is a very important fact, and should have its due weight upon the minds of those who are now, or intend at some future time to be, engaged in the cultivation of our native grapes, possessing the full assurance that the more pains and care they bestow upon the native vines, and the more highly they cultivate them, the finer will be the flavor of the fruit, and their productiveness will be increased a hundred fold.

Nothing has so much retarded the successful culture of the grape in this country, as the misdirected efforts of those who have had the enterprise to engage in this branch of horticulture. Their predilection for foreign grapes, induced them to plant these in preference to our own, and the consequence has been, that hundreds of thousands of dollars have been expended upon *them*, to the great pecuniary loss of all who engaged in this undertaking.

The discouraging effects of their unsuccessful experiments have been severely felt; and unfortunately, after the first failure of their efforts, instead of turning their attention to those kinds of our native grapes with which they could succeed, they abandoned the culture altogether as a *hopeless experiment*. Another cause of the failure of many who have made a proper selection of *native grapes*, (and in the first rank of these I place the Isabella and Catawba,) has been a want of practical experience to direct them in the best mode of preparing the ground, planting the vines, pruning, &c., so as to ensure a vigorous growth of bearing wood, and keep this from extending too far from the roots of the vines, when they are planted with the design of forming a vineyard. Some have studiously adopted the European method of pruning and cultivating the grape. This is not altogether correct. The natural vigor of our native vines is much greater than the foreign, and they require different treatment. The more variable nature of our climate, the greater heat experienced for three or four months in the year, and the comparative coolness of the nights during the same period, have a great influence upon the vines: as do also the severe drouths with which we are occasionally visited in the heat of summer. A proper preparation of the ground, will have a very important influence in preventing any injury that might otherwise arise from these causes. Indeed, after having selected good plants, the success of the vineyard depends so much upon the manner in which the ground is prepared and the vines are planted, that I will here give some directions to those who may wish to enter upon the vineyard culture of our native grapes the present spring, and with whom I may not have an opportunity of a personal interview. In selecting the ground for a vineyard, give *that* kind the preference which is free from clay within 15 or 18 inches of the surface, and is perfectly dry. Ground abounding in springs, after thorough under-draining, is sometimes used for this purpose, but such land should not be selected for a vineyard, if a preferable kind can be obtained. Sand, slate, limestone formation, will answer well for vineyards. Side hills with a southern, south-eastern, or eastern aspect are generally preferred, leaving the north (northeast near the sea coast,) and west winds broken off by trees, hedge, stone or board fence.

In this latitude, (south of the Highlands of the Hudson,) I find that the Isabella grapes ripen quite as well when planted in a level field, protected from the north and west winds by woods or hedges, as on declivities. Several of my vineyards are thus located, and as far as I can perceive, the fruit ripens at about the same time, and is of the same quality as when the vines are planted on steep side hills. I think, however, that north of the Highlands side hills would be preferable.

To prepare the ground for a vineyard, the best way is to turn under the whole of the surface soil from 15 to 18 inches in depth, early in the spring, soon after the frost is out of the ground, by plowing twice in the same furrow. This will place the richest part of the soil, in a position where it will give the greatest supply of nourishment to the vines. Few vineyards in this country have been planted in this way; but the cost is so small and the advantages so great, that it should be done wherever there are no rocks or large stones to prevent it. Instead of adopting this method of preparing the ground, many persons have been content with digging pretty large holes where they intended to plant the vines; and placing in the bottom of these, six or eight inches of good soil previous to putting in the plants. A still greater number of those who have attempted to lay out vineyards, have not taken the trouble to resort to either plan, but have planted the vines with the same carelessness that they would a common annual, instead of giving them the attention and care each plant should receive—especially, when it is expected to produce a fine crop of fruit every season after it has commenced bearing, for a hundred years. Respectfully,

R. T. Underhill, M. D., 400 Broadway,

P. S. The Isabella grape ripens its fruit two or three weeks earlier than the Catawba, and is therefore more sure to produce a perfectly ripe crop in a short season. The Isabella, with me, is more certain to give a *ripe crop every year* than *any other fruit* with which I am acquainted. R. T. U.

New-York, March 16, 1843.

Every farmer, and indeed every person who has a yard, and the side of a building on which it may be trained, should have an Isabella grape vine. Now is the time to procure them, and we hope the season will not be allowed to pass without the planting of a large number of these vines. Where they are not to be procured in the neighborhood, let half a dozen persons or more unite in sending an order to Dr. Underhill, or some nurseryman for the required number of plants. Fifty cents, appropriated to this purpose now, will in a few years furnish an abundant supply of grapes for any family.—Eds.

CULTURE OF THE STRAWBERRY.

Messrs. Editors—I early turned my attention to Horticulture, and in one department of that, the cultivation of strawberries, I think I can show by facts, that I have been truly successful. I have not failed to have a good crop every year, for ten years; and last year, from 1,371 plants only a year old, I sold eighty gallons, besides what was consumed in my family, and some choice parcels, perhaps from vanity, sent as presents to my friends. My garden is a light loam, nearly level, but high and dry, not remarkably rich, it having been taken from a wheat field and enclosed the year before.

My mode of cultivation is to set out the plants or runners at equal distances of 18 inches, and if planted in the spring, keep them constantly worked and the runners off. This may be done with a garden scraper, quickly and neatly. In the month of November, if the season does not set in cold sooner, I manure with well rotted manure and work it in, putting my beds in nice order. I then cover them about one or two inches deep with pine shatters, (having an abundance of them,) straw, chaff—perhaps tanner's bark would do as well, though I object to the chaff because it has more or less wheat, which will vegetate, and give your beds an unsightly appearance. Having made my servants work the shatters under the vines, they stay on until the strawberries are done bearing. In this way the vines are kept warm in winter, the grass and weeds do not spring up, and the fruit is so clean when gathered, that there is no necessity of washing,&c. I make no alleys in my beds, my ground being porous and dry. If I plant in the spring, I deem it advisable to renew my beds after the second year's bearing. This is done by simply directing the runners to the centre of the square formed by the old vines, throwing over the tendril of the runner, a little earth, to keep it in place, and when the runner has taken root, sever it from the parent vine. Then with a hoe, for the space will admit it, cut out the old vines. The manure which the ground has received in two years, will put it in fine order, and thus the bed may be kept up for years. I intend to try plaster on my vines this spring. I sold my strawberries for 50 cents a gallon, throughout the season, in our village market, and could not gratify the demand. I omitted to state that the 1371 plants grew on a comparatively small area, as any one may see by calculating it. I then had four beds. I now have twelve, and in every bed the plants look beautiful, scarcely one missing. I had but very few male plants, though it was by accident.

Brice J. Goldsborough.

Cambridge, Md. Jan. 28, 1843.

TRANSPLANTING THE WHITE CEDAR,

Or, more properly, the American *Arbor vitæ* (*Thuya occidentalis*,) known generally in western New-York by the name of white cedar, but distinct from the true white cedar, or *Cupressus thyoides*.

The beauty of evergreens for door yard scenery, renders the means of successfully transplanting them a matter of some importance—the more so, from the difficulty and failure attending the operation. This failure is so general, that in many places a transplanted evergreen is termed, in derision, a "*nevergreen*," from the brown leaves and dead branches which generally follow.

The chief requisite in removing all evergreens of much size, is to take up a quantity of earth with them. Where this is done, little care is needed to insure success. It is true, those of small size, or less than three or four feet in height, may be successfully managed without removing the earth on the roots, but as larger ones are desirable in forming ornamental grounds, the latter mode need not be considered here.

In transplanting the white pine, except with very small trees, I have uniformly failed with those with the naked roots, and almost as uniformly succeeded where several pounds of adhering earth were taken. As the roots form a closer matting, and the earth adheres to them better, in low, swampy, or mucky land, trees from such localities do better than those from dry upland. It is important not to plant the roots much deeper than they stood originally; but a covering of muck is very useful, and it is well that a good sized hole for their reception be filled chiefly with the same material.

I have been particularly successful with the white cedar. My first experiments were performed in the spring, on trees from five to eight feet high. They were selected from the *border* of the swamp, where the muck was only a few inches deep. The spade was set in from one to two feet from the tree, and the roots and turf cut off by successive strokes in a circle round it. Then bending it to one side, the whole mat of roots and muck was separated with perfect facility, a few inches in thickness, from the hard earth beneath. The trees were then conveyed to their place of destination and set out. Out of several so treated, none failed. I have since removed them in larger quantities in the depth of winter, taking care to procure them from the most exposed situations, in order that the change to their new locality might not destroy them. Equal success in this case was the result. Some, so removed, have been fifteen feet high and three inches in diameter, and from one to five hundred pounds of earth have been taken up on the roots. If, after cutting round them, they were not easily uprooted, a horse was fastened by means of a rope to the tree, a few feet above ground, and the work done at once. A few minutes only were required for taking up such trees. A rope was then tied to the trunk, as closely to the ground as practicable, and a team drew the tree in an erect position up an inclined plane on the sled, to be conveyed away. The time selected was when the soil was but little frozen, being protected by a covering of snow. Freezing the earth on the roots, after removal, was no injury; they may indeed be merely placed on the ground where intended to stand, till spring, protecting the roots slightly with straw or other litter. As a general rule, there should be a body of earth taken up with the roots, large enough to hold the tree firmly in the wind without staking. The weight of so much earth will not render the labor great, even where the trees are carried many miles, if it is done on the snow. The white cedar, though commonly found in swamps, appears to do even better on upland, and to grow denser and of a richer green than in its original soil.

J. J. T.

Macedon, Wayne Co., N. Y. 3 *mo.* 16, 1843.

HOVEY'S MAGAZINE OF HORTICULTURE.

Horticulture in Indiana.—Among the good things in Hovey's Magazine of Horticulture for March, is a letter from the Rev. H. W. Beecher of Indianopolis, on the progress and state of Horticulture in Indiana, which we have read with great interest. He gives a flattering picture of the present condition of Horticulture in this new state, the climate of which is admirably adapted to the growing of fruit to perfection. At a Fair in Oct. last, at Indianapolis, from 55 to 60 varieties of apples were shown, and forty-three new seedlings competed for a premium, three of which were named the Tariff, Red Jacket, and Osceola, and specially recommended for cultivation. The number of seedling apples in the state, is very large, and some of them are esteemed more highly than the old standard fruits. There are 18 nurseries in the state, and apple trees sell for 10, and pears for 20 cts. Almost every farm has an orchard, and pears are beginning to be much sought for. Much attention is also paid to gardening. The Hort. Society has offered a premium of $50, for seedling apples. Other premiums to encourage gardens—the obtaining of choice fruit trees,—introduction of hardy shrubs, flowers, &c. "Our great design," says Mr. B. and a most laudable one it is—" *is to awaken in the body of the people—among farmers, artizans*, and men of small means, a taste for *fruits* and *flowers*, and to fill the state from the beginning, with the most select varieties." We commend their example to our friends in Michigan, Illinois, Wiskonsan, &c.

This number of the Magazine also has a very valuable paper on the Culture of the Grape, under glass, without fire-heat, from the pen of the editor, Mr. C. M. Hovey.

Culinary Vegetables.—From "Notices of Culinary Vegetables, new or recently introduced," we select the following:

"*Seymour's Superb White Celery.*—We were enabled the last season to procure a small quantity of seed of this valuable variety, and thus test its merits. We have not been disappointed; it is all that it has been recommended. It is of the most delicate white, the stalks all solid, and the roots grow to the great weight of from 5 to 13 lbs. It must eventually be considered as the best that has yet been raised. We can confidently recommend it for extensive cultivation.

"*Cuthill's Solid Celery*, is a new variety of much merit, scarcely, if any, inferior to Seymour's Superb; we cultivated a small quantity of this the last season, and think highly of it as a hardy, large and tender kind.

"*Beets.*—A new variety called the *Bassano*, has been recently introduced into France, and extensively cultivated; and it is said to be found in all the markets from Venice to Genoa, in the month of June. It is remarkable for the form of the root, which is flattened like a turnep. The skin is red, the flesh white, veined with rose; it is very tender, very delicate, preserving its rose-colored rings after cooking, and from 2 to 2½ inches in diameter. This description is from the *Bon Jardinier* for 1841. The edition for 1842, states that this variety is highly esteem ed in the north of Italy, and that it is, in fact, one of the best kinds for the table.

"The last season, roots of this variety were produced in the garden of the London Horticultural Society, and from its appearance, Dr. Lindley states in the *Gardener's Chronicle*, it is likely to prove more important as an agricultural than a garden plant. Its form is like a Norfolk turnep, more than half of its bulk being above the ground; the color of the skin deep scarlet; flesh tender and juicy, white, and beautifully ringed with rose color. Some of the roots weighed 5½ lbs. and were 23 inches in circumference. It does not extend downwards like the Mangel Wurtzel, and may thus be grown on thin land. Its top is so small, that it may be grown in rows, so that the roots may nearly touch each other, in the manner of field turneps. It seems likely to prove one of the most valuable acquisitions."

We believe the Bassano beet was cultivated the past season, by our friend and correspondent, J. J. THOMAS, of the Macedon Nursery. Will Mr. T. favor us with his opinion of it?—EDS. CULT.

GRAFTING ON THE MOUNTAIN ASH.

IT is well known that the Mountain Ash (*Sorbus americana,*) is one of the most beautiful ornamental trees, native in the Canadas and the most northern part of the United States; and that it is much cultivated for planting in grounds, and the public avenues, in many places where less hardy trees cannot thrive. It is also well known that in those districts where the mountain ash thrives best, it has been found very difficult to propagate and bring to maturity the apple and pear, of which the country bordering on the 45th degree of latitude in this state, and the Canadas, may serve as an example. It is now found that this beautiful tree may be converted to a still more useful purpose than that of mere ornament, viz: that of stocks for the propagation of the apple and pear, for which it has been proved to be admirably adapted.

At a late meeting of the London Hort. Soc. a communication was received from Mr. Hornby, who has been residing in Switzerland, stating that the grafting of pears on the Ash, was there generally practiced, and that on some of the high plateaus of the mountains, where the climate and soil forbid the natural growth of the apple or the pear, they were now grown with perfect success, "the effect being to retard the blossoms, and give vigor to the constitution." The flesh or flavor of the fruit was not at all affected; and the practice was successful, whether budding or grafting was adopted. It was found necessary that no shoots which the stock might make the first year, should be taken off, but afterwards all such growth must be cut away, and the graft alone remain.

Mr. Thompson, gardener to the Society, stated in reference to this communication, that the mountain ash was one of the stocks on which pears were grafted in the Society's garden. From the pear graft increasing faster than the ash stock, he inferred that the trees could not be as long-lived as the natural pear tree; still as the mountain ash is much hardier than the quince, less liable to be attacked by insects, and would thrive in almost any soil, it might be advantageously used in many situations.

Great numbers of the mountain ash are annually brought through the Oswego canal, from nurseries in the northern counties, and find a ready sale in the villages of central New-York. In all districts where they are found to flourish, and the apple and pear do not, we think it would be well to attempt the cultivation of these valuable fruits on such stocks.

LILAC GRAFTING.—It has been said that the Lilac might be successfully grafted upon the common ash, but it has never to our knowledge been done in this country, until the past season, when a gentleman in one of the southern states, performed the operation successfully. He thus describes the process in a southern paper:—"We have grafted about three dozen ashes, varying from four to ten feet in height, with the common and Persian lilac; and I am happy to say the result has exceeded my most sanguine expectations; for we have grown about twenty-five healthy plants, with branches from one foot to eighteen inches long, which I hope in another year will be covered with bloom. They were grafted in April, after the lilacs had made considerable shoots. I would advise that the scions be taken from the lilac in January or February, in order to retard their vegetating too soon for the stocks." Lilac grafts, like those of apples, or other trees, may be cut at any time before the sap begins to circulate freely; and we hope those of our friends who have the opportunity, will make the experiment of lilac grafting; for if we are able to convert the lilac *bush* into a *tree*, by transferring its foliage and flowers to the ash, we shall have one of the finest of ornamental trees.

HUSSEY'S REAPING MACHINE.

GRAIN growers of the United States are respectfully informed, that the subscriber continues to manufacture his Reaping Machines in Baltimore. He has made great improvements during the past year, by which more than 20 acres can be cut by one machine, in one day. Besides which, a pair of forward wheels have been added to support the fore part of the machine, which formerly rested on the shaft horse. This admits of a tongue to gear two horses abreast.

HUSSEY'S CORN AND COB CRUSHER,

Which obtained the first premium at the exhibition of the N. Y. State Ag. Society, held at Albany, on the 27th, 28th and 29th of Sept. 1842, will be kept constantly on hand for sale; warranted to crush finer, and faster at the same fineness, than any other implement for the same purpose. Orders may be directed to the subscriber, at Baltimore, Md.

March 24, 1843. OBED HUSSEY.

Domestic Economy.

LETTER FROM A FARMER'S WIFE.

MESSRS. EDITORS.—I am a Farmer's wife, and as such should be pleased to become your correspondent, if I could by that means induce others of my own sex, who are much better qualified to write than I am, to become contributors to your paper; for I really think you could devote a column, or a part of a column, for our benefit. Why should all your attention be paid to cultivate the mind of the farmer, while the farmer's wife is wholly neglected. We have no papers devoted to ourselves. There are the fashionable Magazines, &c., but they are filled up with love and murder stories, the fashions of our great cities, music, and a sorry kind of poetry, which are good enough in their place perhaps, but they do not furnish us with the information we want. The farmer's wife wants something more. She wants to know how to fulfill her duty in the sphere in which an all-wise Providence has placed her. I do dot think you are so much of a flatterer as to tell us that we are perfect; neither do I think you so much of a slanderer, as to say we are so proud, vain, or ignorant, as to be unable to learn our duty as the wives of farmers. As almost every thing, in and about the house, comes under the superintendence of the wife, she ought to be well instructed in the art of house-keeping, taking care of the garden, dairy, poultry, &c.; and let me tell you, I think the success of the farmer depends very much on the proper management of his wife. How can a farmer thrive, when his wife crawls out of bed after the sun has been some time shining, jerks on a dirty dress, jumps into her shoes slipshod, which shows the holes in the heels of her stockings to advantage, and then starts in a flurry to get breakfast with her night-cap on, and her bed left in the way she got out of it? In two hours after all hands ought to have been at work, breakfast is ready, which may be a mixed up mess, with sour bread or heavy cakes, spread on a dirty table by the side of the wall, which nothing but a keen appetite, and one continued volley of scolding, could make go down. With such a start in the morning, it is not hard to guess how business will go about the house as well as on the farm, through the day. Instead of this, we ought to rise with the lark in the morning, and as cheerfully go to the business of the day, neatly dressed from head to foot, our houses in order, with a clean good breakfast ready by times. Then if the farmer does not go to his work with a light heart and strong arm, it is not our fault. As a well-wisher of the cause you are engaged in, I send you these few hints, hoping you may do much towards promoting the proper cultivation of the soil, and the proper cultivation of the mind of the farmer and the farmer's wife. Yours respectfully, SARAH.

Ohio, June 20, 1843.

RECIPE FOR MAKING GOOD BREAD.—James Roche, long celebrated in Baltimore, as a baker of excellent bread, having retired from business, has furnished the Baltimore American with the following recipe for making good bread, with a request that it should be published for the information of the public:

"Take an earthen vessel, larger at the top than at the bottom, and in it put one pint of milk-warm water, one and a half pounds of flour, and half a pint of malt yeast; mix them well together, and set it away, (in winter it should be in a warm place,) until it rises and falls again, which will be in from three to five hours, (it may be set at night, if wanted in the morning;) then put two large spoonfuls of salt into two quarts of water, and mix it well with the above rising; then put in about nine pounds of flour, and work your dough well, and set it by until it becomes light. Then make it out in loaves. New flour requires one-fourth more salt than old and dry flour. The water also should be tempered according to the weather; in spring and fall, it should only be milk warm; in hot weather, cold; and in winter, warm."

VINEGAR.—Get a good cask and put it into your cellar. Procure a gallon of good vinegar, and let it stand in your cask a day or two, occasionally shaking it around the cask. You may then commence filling up your cask gradually with whiskey and water, in the proportion of one gallon of the former to eight of the latter. It is best not to fill it up too fast at first. By this process, you may always keep an abundant supply of the purest and best vinegar. B. B.

INK.—You may restore ink that has been frozen, by dropping a small lump of gum arabic into the ink bottle, and when it dissolves, shake the ink well, and the gum will hold the coloring matter in solution.

EXPERIMENTER.

POUDRETTE AS A MANURE,

MAY be had, a superior article, in barrels of four bushels each. This manure has been used extensively on Long Island, in New Jersey, Connecticut, and other states, for several years past, and has been found an excellent fertilizer. A barrel, four bushels, is considered equal in fertilizing properties, to sixty bushsls of yard manure, and is peculiarly convenient for garden purposes, as there are no foul seeds in it. Present price, $5, for three barrels, or $15, for ten barrels. Orders containing the cash, will be promptly attended to, if addressed to D. K. MINOR, Agent,

Jan. 25. 3t. 118 Nassau st. New-York.

☞ Shares in the company may be had at $110, which will entitle the holder to one hundred bushels a year, for 16 years.

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TOWNLEY'S PATENT PREMIUM BEE HIVES.

INDIVIDUAL rights for constructing and using the above hives, may be obtained for five dollars cash, by addressing the subscriber. All letters to be post paid.

Also for sale, a Treatise on the Cultivation and Management of Honey Bees, by the subscriber, 75 Thompson st., New-York.

Feb. 7, 1843. EDWARD TOWNLEY.

TROY AGRICULTURAL WAREHOUSE,

AT 437 River st., nearly opposite the Northern Hotel, is constantly supplied with all descriptions of approved Farming Implements and Machines, at prices to suit the times; among which are

Minor & Horton's celebrated Premium Plows,
Livingston County Plows,
Onondaga County Plows,
Wright's, Starbuck's, &c. &c.

Scrapers, Cultivators, Drill Barrows, Horse and Hand Rakes, Fanning Mills, Churns, Cheese Presses, Corn Shellers, Root Cutters, Straw Cutters, Cradles and Scythes, Grass Scythes and Snaths, Bush and Bill Hooks, Hedge and Sheep Shears, Manure and Hay Forks, Steel and Iron Shovels and Spades, Spinning Wheels, Cheese and Wash Tubs, Pails, Pine and Cedar Ware, &c. &c. &c. Also

MINER'S PATENT PUMPS,

For Wells and Cisterns. Quality improved, and price reduced. Manufactured by the subscriber, and warranted superior to any other kind in use.

Also a fresh and choice assortment of Garden Seeds, by the pound or in smaller quantities. HENRY WARREN.

Troy, March, 1843.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES, FLUSHING, *near New-York.*

WM. R. PRINCE & CO., successors to the late Wm. Prince, deceased, offer for sale the largest and choicest assortment of Trees, Plants and Seeds, to be found in America. The new Catalogues of this immense collection, which comprises the most valuable productions of Europe, Asia, and America, will be sent *gratis* to every *post paid* applicant, and all orders will be executed with that precision and despatch which have distinguished the establishment, and be shipped to any port designated. The Catalogues comprise: No. 1. Fruit and Ornamental Trees and Plants—No. 2. Bulbous Flower Roots, and splendid Dahlias. No. 3. Green-house Trees and Plants. No. 4. Garden and Agricultural Seeds, with reduced wholesale prices.

The proprietors of Nurseries, will, on application, be furnished with a catalogue of Trees and Shrubbery of the smaller sizes, at low wholesale prices. As the prices have been reduced to a cash basis, to suit the times, all orders must be accompanied by a remittance, or by a satisfactory arrangement for the payment; and in regard to all Trees and Plants, when a draft is remitted with the order, a discount will be made of 10 per cent, if for $50 or under, and 15 per cent if for $100. On Bulbous Roots and Dahlias, and on Roses, when 12 or more kinds are ordered, the discount will be 25 to 33 per cent, as stated in the catalogues.

A draft on New-York, at 4 months, or on any other city, at 90 days, will be deemed equivalent to cash.

The following books are for sale—Prince's Treatise on Horticulture, 75 cents; Treatise on Fruits, $2; Treatise on the Vine, $1,50.

Flushing, Feb. 15, 1843.

N. B. 200,000 Mulberry Trees of the choicest varieties for silk, will be sold low, at 6 months to 2 years credit, or will be supplied to be cultivated on shares.

AGENTS FOR THE CULTIVATOR,

IN THE PRINCIPAL CITIES.

Boston—Eben. Wight, Druggist, 46 Milk st.
Hovey & Co. Seedsmen, 7 Merchant's Row.
Providence—A. H. Stilwell, Bookseller.
Hartford—E. W. Bull, Druggist.
New-Haven—George Sherman.
New-York—Dayton & Newman, Booksellers, 199 Broadway.
Utica—Wm. Bristol, Druggist.
Rochester—Samuel Hamilton, 8 Buffalo st.
Lansingburgh, N. Y.—A. Walsh, gratuitous.
Philadelphia—Judah Dobson, Bookseller.
D. M. Landreth & Co. Seedsmen.
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THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

MONTHLY NOTICES.

Communications have been received during the past month, from Richmond, T. C. Peters, Geo. Hezlip, Sanford Howard, Za. Drummond, S. W. Bartlett, D. Bidwell, D. G. Weems, Agricola, Agricultor, Edwin Booth, Adolphus, Wm. Partridge, A., A Farmer's Boy, James T. Earle, T. McCarty, Gleaner, Solon Robinson, The Neighbors, Henry Watson, G. M. Haywood & Co., Observer, (shall have a place in season for next year, and we shall be glad to hear from him on the other subjects to which he alludes,) Geo. Bommer, D. Smith, T*******, A. McDonald, Wm. C. Rogers, A Subscriber, L. Durand, Jas. T. Norton, A. & G. Brentnall, P****, A Subscriber, H. S—d, B. J. Goldsborough, James Whittem, John J. McCaughan.

Acknowledgments.—We are indebted to Rev. Mr. Colman, for a copy of the "Essex Ag. Society's Transactions for 1842,"—a handsome octavo pamphlet of 136 pages. It contains several papers of great value, some of which will hereafter be noticed at length. We are also indebted to Mr. Colman for a copy of "Smith's Essay on the Construction of Cottages," which received the premium of the Highland and Ag. Society of Scotland. This work contains nine designs, with estimates, working plans, &c. for workingmen's cottages, one of which we may hereafter transfer to our pages.

To Alfred Huger, Esq. Longwood, S. C. for a copy of "A Day on Cooper River," for extracts from which, on the culture of rice, see another part of this paper.

To Parsons & Co. for their Catalogue of Fruit and Forest Trees, &c. cultivated and for sale at their Commercial Garden and Nursery, Flushing.

To Wm. McKinster, Middletown, Conn, for Hon. E. Jackson's Address before the Middlesex Co. Ag. Society in Oct. last, together with the Constitution and By-Laws of said Society.

To the Editors of the London *New Farmer's Journal*, for the files of that paper for March; and to P. L. Simmonds, Esq. London, for the Dublin *Farmer's Gazette*, *Edinburgh Weekly Journal*, &c.

☞ In the midst of the general falling off of our subscriptions, on account of the "hard times," the extra exertions of our friends at *Fort Gaines*, Geo., deserve our especial thanks. They have already sent us the cash for about fifty vols., and give us the assurance that they will add another fifty at least, during the season.

The Cultivator among the Indians.—We have seldom received an order for the Cultivator, which has gratified us as much as one from the Superintendent of the Dwight Mission among the Cherokees. We last year sent them six copies. This year eighteen copies have been ordered, for subscribers among the Cherokee farmers. The agent says:—"We have some very enterprising farmers among the Cherokees. You would be highly gratified to see some of their fields, containing from 50 to 150 acres, enclosed with a good fence, covered with corn, wheat, oats, and potatoes, and other vegetables, producing an abundance of the necessaries of life."

Scythe Stones.—Those who want a superior article of this kind, are referred to the advertisement of Mr. Bates in this paper. The stones from his establishment, have a high reputation, and are doubtless of a superior quality.

☞ We have sent the letter of T. M'Cartney, Esq. of Wellsburg, Va., to a friend, who we presume will furnish the information asked for.

State Fair.—It will be seen by the Prize list in another part of this paper, that the next Fair of the New-York State Ag. Society, is to be held at Rochester, on the 19th, 20th and 21st days of September next.

The Ladies.—"Gleaner" gives a hearty welcome to our lady correspondents. He says:—"I see the ladies are coming out, and I am rejoiced to see it, for we need something to arouse the females of our land to their duty. The picture drawn by your correspondent Sarah, is no fancy sketch; and this accounts for the numbers who live and die in single blessedness, rather than drag out such a life as represented by Sarah. I say then, ladies, go on, and rest not till our farmer's wives are what they should be. The power is in your hands, and you can use it to advantage." Another correspondent, Mr. Levi Durand, greets our female correspondents as follows:—"Mrs. Howard's plan and description of a 'Farm House,' I think is very good, and well calculated to suit a farmer who would like to have a convenient house to live in. The letter of a farmer's wife, Sarah, is capital. It comes right to the point, and is just what we want at the present time. I hope that she and Mrs. Howard, and other of your lady readers, will give us from time to time, their ideas on domestic economy."

Preservation of Apples.—We last week received from Tyler Fountain, Esq. of Peekskill, a dozen fall pippins, which had been so well preserved through the winter, that they were as sound and juicy as in November. They were preserved by packing them in barrels with plaster of Paris. The plaster should be sifted, that it may settle down so closely as entirely to fill the spaces between the apples, and thus exclude the air.

Chamber's Edinburgh Journal.—It will be seen by an advertisement in this paper, that this highly popular and most valuable work is about to be republished in New-York, and at the low price of $1,50.

Threshing Machines.—Inventors of these machines are referred to the letter of Mr. Whittem, in this paper.

Domestic Silk.—We were shown recently, a piece of gro de nap silk, of 36 yards, nearly a yard wide, manufactured at the Auburn prison, for Mrs. Darius Carter of East Bloomfield, from cocoons raised by her the past season. Though not as highly finished as the foreign silk, it was a far more substantial fabric, and weighed nearly twice as much as the foreign article. In a letter accompanying the silk, Mr. Polhemus, the agent of the prison, says—"We have sent it just as it came out of the loom. It has not quite as much lustre as we could wish, but it will do as much service, we venture to say, as any piece of silk that can be found in the United States." Mrs. Carter deserves great credit for her perseverance in raising cocoons. In 1841, she raised a quantity of cocoons, reeled and prepared the silk for weaving, but was unable to fulfil her intention of having it wove and made into a dress to be exhibited at the State Fair at Syracuse, for want of the necessary facilities for weaving. She however, presented the silk at the Fair, and received the Society's first premium of $20. Now that the difficulty of getting the cocoons manufactured, is removed by the introduction of this branch of business into the Auburn prison, we doubt not the time will soon come when it will be the boast of many of our fair readers, that they can dress in silks which their own hands have reared.

Dairy Cows.—"A Subscriber," of Red Hook, after alluding to the statement in our last paper, of the amount of butter made weekly by Mr. Sotham, from ten Hereford cows, says:—"I am making 30 lbs. of butter per week from four cows of the native breed, but two of which are believed to be first rate. The two considered the most inferior, I purchased about 18 months since, one for $13, and the other for $16." In another part of this paper, will be found a statement of the products of two dairies—one of 25 cows in Ohio, and the other of 12, in Connecticut, to which we refer such of our readers as are interested in this branch of husbandry. It will be seen that in one case, the average product in butter and cheese. from 25 cows, was 561 lbs.—in the other, the average from 12 cows was $533\frac{1}{2}$ lbs. Nothing can show more forcibly than these statements, the loss the farmer sustains by keeping poor cows, or half feeding good ones.

The Season in Indiana.—Extract of a letter from H. Weston, Esq. to the Cultivator, dated April 1:—"Cattle are dying by scores through the country, for want of forage. From the length and severity of the winter, our cattle have consumed from four to six times the ordinary quantity of food; and although winter commenced a full month earlier than usual, (Nov. 9,) it continues a month later. For the last week it has not been as rigorous as heretofore, but I yesterday hauled hay on my sled, driving three or four miles upon the river, (Iroquois,) which in many places is frozen solid to the bottom. Last year in favorable situations, prairie grass was 18 inches high, 15th of March, and we had spinnage and spring flowers. Great fears are entertained that our wheat is killed."

The Weather in S. C.—Extract of a letter from W. S. Gibbes, Esq., Chestnut Grove, S. C., to the Cultivator, dated April 4:—"We have had the most extraordinary March ever known in this part of the world. We have had hail, sleet, and three snow storms, two of them heavy and deep, within the month; the last of them on the 21st. For three weeks the thermometer was scarcely ever above the freezing point at sunrise, and was within that time as low as 22°, 26, and repeatedly 28°; and between the wet and cold, I have been able to do only six whole and two half days of plowing in the whole month of March."

Ruta Bagas in S. Carolina.—A letter from Alfred Huger, Esq. Longwood, St. Thomas Parish, S. C., to the editors of "The Cultivator," says—"I have raised the ruta baga, weighing ten pounds without the leaves or tops, taken promiscuously from the patch; and I have a friend near me, who has had them weigh fourteen pounds. The same land would have produced 300 bushels sweet potatoes to the acre."

National Ag. Society.—A correspondent wishes to know when the next meeting of this Society is to be held? The constitution leaves it to the Board of Control to fix the time. We have seen no notice for a meeting this season.

American Thorn.—Mr. S. Parsons, Hoosick, quotes from Mr. Downing's Cottage Residences, a recommendation of the American thorn for ornamental hedges, in which Mr. D. says that "a farmer may gather the seeds and raise them himself," and requests us to ask Mr. D. to inform us "how the American thorn can be propagated from the seed," as he does not believe it can be done—at least, we infer this from his letter.

Portable Saw Mills.—In answer to the inquiry of Mr. McMartin of Hogansburgh, and Mr. Cunningham of Kentucky, we state that these mills are only manufactured by the patentee, Mr. Geo. Page of Baltimore, Md., of whom alone they can be procured. The price of the portable saw mill, with 12 feet earriage, and 24 feet ways, and 4 feet saw, is $300. Extra saws for shingles, with three pair of head blocks, $125.

☞ In answer to several inquiries for Dr. Cloud's address, we give it as follows:—"Dr. N. B. Cloud, P. M. Planter's Retreat, Russell co., Alabama."

Preparation of Ground and Seed for Planting Corn.—A correspondent of Claverack, under the signature of "Gleaner," gives the following directions:—"Harrow your ground well before you furrow it, and plant nothing but good seed. If you would prevent crows from pulling it up, tar it; first soak your seed till it is swelled, say from 24 to 48 hours; then take a tub, (I take a barrel and saw it in two, which makes very handy ones,) and put your corn in; take a kettle, put a quart of water in it, heat it till hot; then stir in your tar, (a pint is enough for a bushel,) till it is melted; pour it on your corn, and mix it well; it will look as if it had a coat of varnish; dry it with plaster, and it is ready. I have done this for some years, and have no trouble with crows; but formerly I could not keep them away."

Lard Oil.—It appears from a statement which we find in the Cincinnati Gazette, that 116,944 gallons of lard oil have been made in that city during the past year. The Gazette says—"The quantity of Star and Stearine candles cannot be ascertained with certainty, but it is considerable. Lard oil is now worth, for first quality, $62\frac{1}{2}$ cts; second quality, 45 cts; stearine candles, 1st quality, 25 cts; second quality $12\frac{1}{2}$ cts. The consumption of this article is very rapidly increasing."

Obituary—Gen. John Armstrong, author of the "Treatise on Agriculture," noticed in our last number, died at his residence in Red Hook, on the 1st of April last, in the 84th year of his age.

Oil Cake.—In answer to the inquiry of J. T. Earle, Esq., we state that oil cake, ground and put up in barrels for transportation, can be had in this city, at from $15 to $18 per ton. Its transportation from here to New-York, will cost about $1,50 per ton. The cost from thence to Baltimore, may be ascertained in that city.

A New Potatoe.—"Mons. A. Husson, of this city," says the New-Haven Farmer's Gazette, "has a beautiful variety of the Potatoe, called the Duck Bill, which he brought from France, and thinks may be cultivated here to advantage. He represents them as being great bearers—having last year obtained from one bushel of seed, 31 bushels. From one hill, where but *one* potatoe was planted, he dug *ninety-nine*. We had a sample of these potatoes last fall, and they proved to be a rich variety."

Answers to Inquiries, &c.

USE OF SALT—RECLAIMING SALT MARSH.

"MESSRS. EDITORS—I should be pleased to learn where salt has been used as a renovator of the soil, the quantity applied, and the nature of the land. I should also be pleased to learn the quickest and most effectual way to reclaim salt marsh from the tides overflowing; and if you are acquainted with any sufficiently reclaimed to produce crops other than grass, as those which may be seen on the Delaware below Philadelphia.

D. G. WEEMS."

Salt, however valuable as a manure, can hardly be called a renovator of the soil, as its use adds little if any thing to the matters constituting the actual food of plants; the best conducted experiments would show that it acts by preparing food for plants, and stimulating, or aiding them in the appropriation. Little use as yet has been made of salt in this country; in England it has acquired some favor, and its use we believe is increasing. The experiments reported by Prof. Johnston, are certainly much in its favor. It is the most effective on light or gravelly soils; and the experiments indicated that the proper quantity was from 5 to 15 bushels per acre. Where 40 bushels was used, vegetation was destroyed. It succeeded well when sown on the land in November, after the wheat was sown, but the method most recommended, is to mix lime and salt in the proportions of two of the former to one of the latter, letting the mass remain covered for one or two months, and then used by sowing the mixture at the rate of 30 or 35 bushels per acre.

As to reclaiming salt marsh, the most efficient method, and one derived from actual experience, may be found at page 52 of the Cultivator for 1841. We refer Mr. W. to this with the more confidence, as it agrees with the successful experiments made in reclaiming marsh, by A. Dey, Esq. of New-York, a number of years since.

We have no knowledge of any marsh so reclaimed, as to be capable of a course of crops, or a rotation of roots, grains, and grasses; and the experiments recorded by Mr. Welles and others, would indicate that such results are rarely if ever attained. When reclaimed by embanking and draining, there is little difficulty of covering the land with the best grasses, such as herds grass and timothy, but there is not often solidity enough for other cultivation, so far at least as experiments at reclamation on our coast are recorded. In England, considerable tracts are reclaimed, and used for all purposes of cultivation, but it has been at expenses which would not be admissible in this country. In some few instances, in the reclaimed marshes below Philadelphia, crops of potatoes have been grown, and oats, but unless we are misinformed, the results were not such as to invite repetition. If any of our friends are acquainted with lands so reclaimed, as to be capable of a course of cropping, we shall be pleased to receive accounts of the process.

THE MOLE.

AT page 187, of the last vol. of the Cultivator, may be found a reply to some inquiries respecting the mole, made by Mr. CARR of St. Louis. From the account then given of the animal, we were led to suppose it might be the common meadow mole of the Atlantic states; but we have received another communication from Mr. C., in which he says the animal that gives him and others so much trouble in that region, "is furnished with a small pointed proboscis, by means of which, aided by two broad, round sort of web fore feet, with sharp claws in each, they bore a sort of furrow just under the surface of the earth, along which they pass with great speed, rendering their track visible by the earth thrown up. The hind feet and legs are more like those of the mouse. The fur is fine and of a deep lead color. Last year they they obliged me to replant three or four times, large portions of my corn and other crops; besides either wholly or in part destroying in my garden and yard, a great many of my most rare and costly flower plants, shrubbery and vegetables."

The description here given determines the character of the animal; which is the Shrew mole, *Scalops aquaticus* of the naturalist. It is frequently met with in the Atlantic states, but rarely produces much mischief. Its natural food is the common earth-worm, grubs, larvæ of ants, &c., and Dr. De Kay supposes the good it does in destroying these, will compensate for the injury done to roots and germinating seeds. Where they are numerous, however, they are the pest of the gardener, defacing the beds, and uprooting the young plants. Dr. De Kay says that it is asserted they never frequent gardens in which the castor oil plant, *Palma christi*, is growing; but adds, he should place little dependence on this preventive.

In Europe, when the mole becomes troublesome, he is destroyed by professional mole catchers, or by poisoning, or by traps. It is found that if fine shreds of fresh lean beef are placed in their furrows, the moles will eat them, if found soon after deposit, and if poison, arsenic or strychnine, is placed on these shreds, they are frequently killed. The trap most recommended is one constructed on the principle of the one, a figure of which is given in the April Cultivator. Dr. Godman has given a very interesting account of the mole, and its habits; but wherever it shows itself in numbers, it is a pest of no small magnitude. For accurate descriptions, with drawings, of the various animals known under the names of moles, or mice, the reader is referred to the 1st volume of the Natural History of the State of New-York.

DOG CHURN.

"MESSRS. EDITORS—Will any of your correspondents inform me through your valuable paper, of the best and cheapest modes of manufacturing a dog churn to churn the milk or cream from nine cows. I have not seen in the Cultivator as yet, any thing to answer the purpose of this inquiry. D. BIDWELL."

Ghent, N. Y. 1843.

We should be gratified to receive from some experienced correspondent such directions as Mr. B. desires; and will add the request that they may be accompanied with a drawing, which may be engraved for the Cultivator.

STEEN KROUT.

"EDITORS OF THE CULTIVATOR—Will you be so kind as to give some directions, so that I may know the weed steen krout; as I do not know it, nor can I find any one who can inform me. A. B."

Fairfield, Ct., 1843.

The following from "Eaton's Botany," will give the description desired :—"*Lithospermum arvense,* (steen krout, stone seed, wheat thief,) stem erect, branched; leaves lance linear, rather acute, (lower ones obtuse,) veinless, hairy; calix nearly as long as the corol; segments spreading; seed rugose; height from eight to fifteen inches."

The farmer will, however, perhaps better know it by this description. Root long, tapering, and deep red, from whence one of its names, red root. A great number of branches or stems spring from each root, bearing leaves long and pointed, and downy or hairy. On the stems are clusters of blue blossoms, distinct, but not large or conspicuous. Its height in the wheat crop, varies with the soil, but is commonly from 12 to 20 inches. It is a pest to the grain grower, and it will be well, if A. B. has no more acquaintance with it, than may be derived from books.

CATTLE FOR THE SOUTH.

"MESSRS. EDITORS—I should be pleased to learn through the Cultivator, your opinion of the relative merits of the Devon and Ayrshire breed of cattle, as best suited to the South. The Durhams will not suit this latitude. (Charlotte, North Carolina, and a light soil.) The object is principally butter and beef, and sometimes for the yoke.

A."

We wish to answer the question of our correspondent, in part, by asking another. Has "A." ever tried the Durhams, and satisfied himself they will not do in that latitude? The Durhams require good feed it is true, and no breed will do well without it. Devons and Ayrshires must have feed, or they will make neither beef or butter. The soil may be light, but if made rich it is precisely the soil for corn and lucerne, and if a little marl or clay should be added, clover would doubtless succeed admirably, and with these, Durhams we imagine would do well in any latitude.

If experiments properly made, have proved that the Durhams will not succeed, then for *all* the purposes mentioned by our correspondent, we should prefer the Devons. For beef and for the yoke, there are few if any breeds superior to the Devons, and if not in general equal to the Short Horns or Ayrshires for milk, still we have known some excellent milkers among them. The Devons are hardy, walk quick and lively in the yoke, and when fed make beef of excellent quality. For milk or butter alone, the Ayrshires would doubtless be superior to the Devons, and are indeed equalled by few breeds in this, or any other country; but where the beef, and aptitude to labor are to be taken into account, we think the Devons must have the preference.

USE OF CHARCOAL.

"MESSRS. EDITORS—In your last No. there is an article on the use of charcoal as a manure, by a Virginian. A neighbor of mine, a few years since, nearly destroyed a piece of land by putting a quantity of coal upon it. The coal was taken from the kiln where it was burnt, using such only as was too small for the blacksmith. The quantity used was probably too great; or is it necessary that the coal should be pulverized. There is a good deal of coal burned here, and sometimes it is burned in the fields, and I know these spots are rendered unproductive. I hope we shall receive more information in the Cultivator on the use of charcoal as a manure.

MADISON JOHNSTON."

Boligee, Ala., March 20, 1843.

In the case alluded to by Mr. J., the quantity was doubtless too great, and it was applied in too coarse a state. All the experiments recorded by Liebig and others, of the vegetation of plants in pure charcoal, was in that finely pulverized. We cannot conceive that any moderate quantity of fine coal could destroy land, but the more intimate the union between that and the soil, the better the effect. We are aware that coal beds undisturbed, are at first barren, but we have observed that in a few years such spots always have a luxuriant vegetation. Time seems to be necessary, where no means are used, to combine the charcoal, burnt clay, &c. with the soil, to render it fit for vegetation; but where such spots are subjected to the plow at once, and the coal, burnt earth, soils, ashes, &c. fully united, they are fertile from the first. An acquaintance of ours, a blacksmith, always burned his coal in his garden, and by moving the spot, considered the process a most effectual means of keeping it rich and productive. The first crop after the burning and plowing, with him was onions, and he never failed of the finest kind. It must be added, however, that he left nothing but the finest coal, dust, &c. on the ground; all else was removed.

SUBSTITUTE FOR LINEN.

GENTLEMEN—I invite your attention to the description of a kind of native grass, said to possess in a great degree, all the valuable qualities of silk and linen, to be found in Silliman's Journal of Science, vol. 27, page 179.

With a view of its being brought into use, and more generally known and manufactured, I have offered through the medium of the Society for promoting Native Industry, &c. &c. ten dollars as my part of a premium for the BEST GROWING PLANT *(save flax,)* and *manufactured article*—together with the mode of growing the plant—saving the flax, (if I may so express it,) produced from that grass, and exhibited at the next American N. Y. Fair, to be held in this city. Hoping that through your valuable periodical, this may receive a general circulation,

I remain yours, &c. A FRIEND."

New-York, March, 1843.

We have turned to Silliman's Journal, and find the paper alluded to by our correspondent, to be a communication from a gentleman in Salem, Mass., setting forth in glowing colors the importance of the discovery made, but without naming the plant, or the material, and adding that the discovery has been patented, &c.

Unless we are much mistaken, the plant alluded to has been found to be the silk grass of our fields, or as some call it, milk weed, *(Asclepias syriaca,)* and the expectations excited at the time of its usefulness, have vanished. We give a place, however, to the note of our correspondent, as we may mistake as to the plant; and because the subject is one of considerable importance to the public. If some of the visitors to Oregon, via the Rocky mountains, would secure some of the seeds of the perennial flax described by Parker and by Farnham, we should hope to find a plant introduced, which would come much nearer the expectations of our friend than the Salem grass.

SOILS.

"MESSRS. EDITORS—I perceive that you make a difference between the mechanical or physical nature of soils, and their chemical one, so far as plants are concerned. Will you be kind enough to state more fully what is intended by these terms, and also furnish some instances, if they are known to exist, in which these respective natures have been changed, or successfully modified. A YOUNG FARMER."

The mechanical or physical character of soils, depends on their original constituents, which are usually disintegrated rocks of some kind, and composed of sand, clay, lime, and a few other matters, in smaller and varying proportions. Any of these original elements are unfit for vegetation in themselves, and the value of soils, or their capability of being made fertile, is in a great degree depending on the proportion which these several parts bear to each other, and their greater or less intimate union from fineness and mixture.

The chemical character of a soil depends on the salts it contains, and its power of changing such matters as may be combined with it, or added to it, into food for plants. Thus vegetable matter, the several gases, the mineral and vegetable alkalies, &c. &c. all go to change or modify the chemical condition of a soil. We are unable as yet to designate that condition of soil, and its various mixtures, most favorable for perfect chemical action; but every farmer who takes note of the effect of his various operations on the different soils he cultivates, is contributing his aid to the final adjustment of this most important question.

In answering our correspondent's query, as to instances in which soils have been changed or modified mechanically, or chemically, we have only to refer to a multitude of cases which have occurred within a few years, or since a more rational view of soils and their cultivation has obtained. The first is the striking one of Holkham, by Mr. Coke. In the language of Mr. Pusey, "we much doubt if that lamented nobleman, with all his enterprise, could have fed oxen where rabbits had previously browsed, as was his just boast, unless those sandy commons had *first been made solid with marl.*" Here the application of marl effected a mechanical, and we think probably a chemical effect also. They gave firmness to the sands; this was mechanical: the lime contained in the marl rendered what vegetable matter the soil contained soluble; this was chemical. Mr. Rham informs us that the Flemings have converted their sandy desert into one of the most fertile districts of Europe, by bringing up year after year, two inches of subsoil from trenches shifted every year, until they have reached a depth of two feet. This subsoil is a stiff yellow clay, containing little or no lime. Placed on the surface of their drifting sands, the clay gave solidity, and the power of retaining moisture for the use of plants. In this case, the effect, it is clear, is mostly mechanical. One of the greatest improvements in English agriculture, has been the application of clay to the large tracts of peat and peaty sand in Lincolnshire. Part of this clay is a marl, but much of it is ordinary clay, and can only act mechanically on the peat. There are many instances in which a load of clay is worth more on a soil than a load of dung. Mr. Pusey gives a case, in which the soil was of coarse gravel and sand, so porous that dung and bones failed to produce either turneps or barley, from which, after 50 cart loads of shale per acre, had been spread over it, produced 40 bushels of barley per acre. Such shales are mostly clay, and are speedily converted into that material by atmospheric action. In this instance, it is evident, a load of clay acting mechanically, was worth more than a load of dung; and on light sandy or porous soils, such will be the result in nine cases out of ten. Dung cannot benefit land beyond a certain point; but if you change the character of the soil favorably, that point will be proportionably elevated.

In this country, the instances in which a physical or mechanical change has been effected, are very common. There are thousands of acres in New England, which within a few years have been converted from worthless muck swamps, or peat bogs, into the most valuable soils for cropping, by freeing them from their surface water, and covering the face of them with sand or gravel. For another instance, we have only to refer to the use of clay by Judge Buel, which on his sands effected as marvellous a change as did the marl of the Earl of Leicester on his. Here the greater benefits of manures on suitably constituted soils are still apparent; and it is one of the most beautiful laws that govern such matters, that when a mechanical defect in soils is in this way corrected, the beneficial results remain for years if not for centuries.

When earths in an uncombined state, as pure sand, with clay for rendering it more friable, or pure clay with sand for making it more solid and retentive of moisture, are added, the effect is mechanical only, or at least such is the first result. But when the earths in combination with salts are applied, then the action is both mechanical and chemical. The green sands and marls of New Jersey and Virginia, so extensively used, and which have been so well described by Mr. Ruffin, belong to this last class. Ashes also, are another instance when applied, of a substance acting in both ways. The potash produces its proper effect in the formation of silicates, while the drawn or leached ashes are mostly composed of silex and lime, and their action is mostly mechanical. There are cases known in which an earth used for manuring or modifying the character of soils, produces a good effect on soils very differently constituted; thus the rich marls used in Norfolk, for giving solidity to porous, sandy or gravelly soils, operates admirably on the heavy clay ones, of which some are found in the same counties. The reason is easily seen; in the one case the clay portion of the marl combines with the sand, and gives greater density and tenacity; in the other the lime and sand of the marl, unites with the clay, and renders it more friable, and more easily and profitably cultivated. It may be proper to add, there are some substances used as manures, the action of which is purely chemical. Such is common salt, soda, nitrate of potash, potash, and in general all such matters as are wholly soluble in water.

INDIAN CORN.

Editors Cultivator—In the matter of Indian corn, there seems some diversity of opinion as to whether the white or yellow variety is most nutritious. Generally, in this section, the yellow is thought to be much the most so. The object of this communication is to draw from you any definite knowledge you may have about it; for if there is much difference in the nutriment containin the white and yellow varieties, it is of considerable importance it should be generally known. D. Smith.

Burlington, N. J.

Strange as it may seem, the first analysis of Indian corn that has ever been made, or at least that has fallen under our notice, is the late one by Dr. Dana, and that had no reference to corn as a variety, but as a general article of nutriment. We have consequently nothing to guide us in the matter but public opinion; and this varies with the different sections of our country. At the north, yellow corn is almost universally preferred; indeed we do not recollect ever meeting with more than one person north of the Delaware, who maintained the superiority of white corn. At the south, on the contrary, the preference is decidedly given to white corn, a fact, we suppose, to be attributed rather to its superiority for making light and palatable bread than to any greater nutritive power it is supposed to possess. We hope that Dr. Dana will continue his investigations with the different varieties of this invaluable grain; for he could scarcely confer a greater favor on American agriculturists than by developing the qualities, and correcting any errors that may exist with regard to this most important of plants. Farmers, too, by feeding pigs on the different kinds of corn, and carefully noticing their gain for a certain time, might do much towards determining the question of nutritive power. At present, all must be considered mere guess work or conjecture.

CUTTING TIMBER.

"Editors of the Cultivator—I have long wished to hear an opinion expressed by some of our scientific men, in regard to the proper time of cutting timber, and the cause of worms in wood. I have frequently observed axe handles, and handles of other farming implements, almost eaten up by worms, and perhaps not a hole to be seen on the outside of the wood. The question is, how come the worms in the wood, and what time of year must timber be cut, to prevent the worm from attacking it?

Adolphus."

There are a multitude of insects that deposit their eggs in wood. In process of time the egg changes to a worm or grub, which feeds on the wood for a time, when it emerges from the tree and becomes a perfect insect. Of these borers those that prey on the apple, locust, &c. are most familiar. There are some kinds of timber, such as hickory, ash, and maple, which are liable to be injured by worms at times, to such a degree as to render them utterly worthless. They become what is called "powder post;" or present when broken, or cut into, little more than a fine dust, while the outside is apparently sound. Hoop poles furnish frequent examples of this insect destruction; and to avoid it, coopers prefer having their poles cut in the fall or winter; from November to February, being considered the best to secure exemption from the worm. It would appear, however, that there is a short time after the leaf has been fully formed, and the bark ceases to peel readily, in which wood if cut will be free from the worm. From some experiments, this period would seem to be in the month of June. The cause of this, doubtless is that the insect depositing the egg is not developed so early in the season; but appears immediately afterward.

THE YELLOW LOCUST AND MULBERRY.

In answer to the inquiry of "A Subscriber," at Poughkeepsie, we would state that the tree known as the *yellow* locust, is the variety grown for timber. It is raised from the seed, which we presume may be had at the seed stores in New-York. The seed does not vegetate readily, owing perhaps to the fact that they do not always come to perfection here. The following method of preparing the seed it is said will insure success:

"Place a quantity of seed in a vessel holding a quart or two, pour on boiling water, and let it stand twenty-four hours. Then decant it, and it will be found that a considerable number are softened and swelled by the operation. These are to be separated from the rest and planted; and to the remaining unswollen ones another portion of hot water is to be added, which also is to remain twenty-four hours, and a second selection made, to be planted as before. In a few days nearly the whole of the seeds will be thus prepared."

The Multicaulis and Canton are considered the best varieties to cultivate forfeeding the silk worm. In relation to the method of planting the trees, we quote the statement of Mr. Barbour of Massachusetts, before the late convention of silk growers at Northampton. He says:

"I set mine on dry, warm land, in a state of middling fertility, 4 by 2 feet, *one root in a place*, like other trees. Managed in this way, I fully believe they are safe from the dangers of winter, any where between Canada and the Gulf of Mexico. The unripe ends of the limbs may, or may not, be injured; but this is of no consequence, as they should all be headed down in the spring. On the other hand, by laying my trees, and leaving them to stand as they grow, I have lost many thousands. The reason is obvious, although, as in most cases, it is experience that has suggested that reason. *They do not form roots.* In the other way, the roots extend and fill the ground.

"In the spring, I cut my trees down within about two inches of the ground, reserving a few standing for early feed. This process adds greatly to the quantity of foliage."

THE SEASON

The present, has been thus far, one of the most remarkable seasons for half a century. If the degree of cold has not been as great as on some other years, for a few days, the average low temperature of February and March has rarely been reached. A vast quantity of snow has fallen. The most careful observations in various parts of the state, average from 11 to 13 feet; and in Maine, we have seen one instance where the whole fall was estimated at 16 feet. Even now, April 20th, no inconsiderable portion of the northern part of the States is covered with snow, and where the fields are partially cleared, drifts of great depths line their borders. One of the consequences of this state of things is, that there is a general scarcity of fodder; and severe losses of animals from starvation and disease are reported from all quarters. The coarser grains such as corn, barley, and oats, have been mostly used up, prices have materially risen, and the effect must be felt on the wheat market, as thousands who had relied on corn or barley for bread, will find their resources in that respect cut off. What effect such long continued cold, and such a depth of snow, will have on the wheat now in the ground, cannot at present be perfectly foreseen. So far as we have seen or heard, the injury sustained has not been equal apparently to what was feared before the partial disappearance of the snow. There must be some fields, however, where the young plants that have escaped the frost, will be found smothered by the snow, as was extensively the case a few years since. Another consequence of the long continuance of cold and snow, is the serious retardation of the farmer's work for the spring, by which a vast deal of work will be thrown into the space of a few days or weeks, and the greatest economy in the management of time and labor rendered indispensable. It is not to be inferred, however, that because the season is late, it must be unproductive, or that the labor of the farmer will go unrewarded. Some of the seasons within the last half century that have been noted for their severity, and the late period to which the snow covered the earth, have been equally noted for the extraordinary productiveness of the coming summer. Fortunately, thus far, the melting of the vast body of snow has been gradual, by which the floods that would have followed their dissolution by rain, has been prevented, except in a very few instances.

AGRICULTURAL PAPERS IN NEW-YORK.

"The Plough Boy" was the first agricultural paper published in this state, and the second in the Union. It was commenced June 5, 1819, by the late **Solomon Southwick**, and by him published weekly, in quarto form, for three years, when it was discontinued for want of sufficient support to sustain it.

The next was the "New-York Farmer," originally commenced, we believe, at Huntington, Suffolk county, in 1828, by S. **Fleet**, but shortly after removed to New-York city, where it was published by Mr. F. for a number of years, when he disposed of it to D. K. **Minor**, by whom it was continued till 1838, when its publication ceased.

The Genesee Farmer was commenced at Rochester on the 1st of January, 1831, by the present proprietor of "The Cultivator," and by him continued as a weekly paper, until the 1st of January, 1840, when it was united with

1. "The Cultivator," the publication of which was commenced in Albany, by Judge **Buel**, in the year 1834.

The Monthly Genesee Farmer, the publication of which was commenced January, 1836, was made up from the weekly Genesee Farmer, and issued at the same office, till the consolidation of both papers with "The Cultivator."

2. "The New Genesee Farmer," now published at Rochester by **Crossman & Shepard**, was commenced January, 1840, by **Bateham & Marshall**. It is published monthly at $1 a year.

3. "The United States Farmer" was commenced in New-York, January, 1842, by S. **Fleet**, the original publisher of the New-York Farmer, and is now published by Mr. F., monthly, at $1 a year.

4. "The Central New-York Farmer," at Rome, was commenced January, 1842, under the editorial direction of **Johnson & Comstock**. It is continued by the latter gentleman, monthly, at 50 cents a year, and edited by Messrs. **Comstock, Johnson & Bement**.

5. "The American Agriculturist," commenced the last year in New-York city, by the Messrs. **Allen**, is now edited by A. B. **Allen**, and published by Saxton & Miles, monthly, at $1 a year.

6. "The True Genesee Farmer," the April No. of which only has reached us, was commenced the present year at Rochester. It is edited by N. **Goodsell**, who was a contributor to the editorial department of the Genesee Farmer, for the first two years or more after its commencement. It is published by **Wm. A. Wells**, monthly, at 50 cents a year.

THE CULTIVATOR IN THE COTTON REGIONS.

The testimonials we are almost daily receiving of the high estimation in which the Cultivator is held by very many of the planters of the south and southwest, are truly gratifying. We have, however, to regret that so few among the number of our friends have afforded us that assistance which we so much require, to enable us to impart to the southern reader a more immediate and personal interest in our pages. To give it this interest, it is only necessary for a few of our numerous subscribers there, to furnish us with communications on the various subjects connected with the advancement of the agricultural interests of the south—such as the improvement of their soils, the culture of their various crops, and general suggestions on the improvement of their husbandry. If we could persuade the planters to communicate their progress and improvements as freely as our northern farmers do, the interest of our southern readers would be greatly increased. We are particularly indebted to **Alex. M'Donald**, Esq. of Barbour co. Alabama, and to our friend "T." of Wilkinson co., Miss., for their very flattering notices of the value of the Cultivator. We are only deterred from publishing their favors at length, by the high commendation bestowed on our pages. "T's." letter will be found, in part, on another page of this paper, and we annex an extract from Mr. M'Donald's letter, and shall be glad to hear from both these gentlemen frequently:

"Notwithstanding nine-tenths of the pieces written, do not, and cannot apply to our southern system of husbandry, owing to the great difference in latitude between this section of the United States, and the section where the work is published, still there are hundreds of suggestions and maxims laid down throughout the volumes, that one out of a hundred is worth more to a cultivator of the soil, than a year's subscription. This region of country abounds with marl, that I have no where found so good a description of, as at page 146, of the third volume of the Cultivator. Owing to the recent settlement of the country, and the amount of fresh rich lands to cultivate, that our farmers have so easily procured, little attention as yet has been paid to the marl that abounds in all the banks of our rivers, creeks and branches. We last summer spread over our garden some of it, and from the trial we have made of it, we think it a most important manure."

"On the 18th March of last year, we had green peas on our table; to-day, (March 18,) we are apparently in the midst of winter. Scarcely any movement in the vegetable kingdom. Many of us are planting our corn over the second time."

CATTLE SHOW AND FAIR

Of the N. Y. S. Ag. Society, to be held at Rochester, September 19, 20 *and* 21.

List of Premiums for 1843.

I. BULLS—*Three years old and over.*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	

Copy of the N. Y. S. Ag. Soc. Transactions.

II. BULLS—*Two years old and under three.*

For the best,	$15	For the third best,	$5
For the second best,	10	For the fourth best, vol. Trans.	

III. BULLS—*One year old and under two.*

For the best,	$15	For the third best,	$4
For the second best,	10	For the fourth best, vol. Trans.	

IV. BULL CALVES.

For the best,	$10	For the third best,	$4
For the second best,	6	For the fourth best, vol. Trans.	

V. COWS—*Three years old and over.*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best, vol. Trans.	

VI. HEIFERS—*Two years old and under three.*

For the best,	$12	For the third best,	$5
For the second best,	8	For the fourth best, vol. Trans.	

VII. HEIFERS—*One year old and under two.*

For the best,	$10	For the second best,	$5

For the third best, volume of Transactions.

VIII. HEIFER CALVES.

For the best,	$8	For the second best,	$5

For the third best, volume of Transactions.

IX. COWS—*Cross between the native and improved breeds.*

For the best,	$12	For the third best,	$6
For the second best,	9	For the fourth best, vol. Trans.	

X. HEIFERS—*Cross between the native and improved breeds, between two and three years old.*

For the best,	$10	For the third best,	$5
For the second best,	7	For the fourth best, vol. Trans.	

XI. HEIFERS—*Cross between the native and improved breeds, over one and under two years old.*

For the best,	$10	For the second best,	5$

For the third best, volume of Transactions.

XII. COWS—*Native breed, (not having any imported blood.)*

For the best,	$10	For the third best,	$5
For the second best,	8	For the fourth best, vol. Trans.	

XIII. HEIFERS—*Native breeds between two and three years old.*

For the best,	$10	For the second best,	$5

For the third best, volume of Transactions.

XIV. DAIRY COWS—*Of any breed.*

For the best dairy cow, from which shall have been produced in thirty successive days, the greatest quantity of butter—quality as well as quantity considered—which shall be exhibited at the time,	$15	For the third best,	$5
For the second best,	10	For the fourth best, vol. Trans.	

No premium will be awarded unless an accurate statement of the manner of feeding the cow, management of the milk, and method of making the butter, the time it was made, the breed of the cow, if known, the time after calving—the cow as well as the butter to be exhibited at the time, with certificates from the person or persons who milked and managed the cream, and churned the butter.

WORKING OXEN—*Over four years old.*

For the best pair,	$15	For the third best,	$5
For the second best,	10	For the fourth best, vol. Trans.	

STEERS—*Three years old.*

For the best pair,	$10	For the second best,	5

For the third best, volume of Transactions.

In awarding these premiums, particular reference will be had to the close matching, excellent training, and docility of the animals, as well as their general good appearance.

FAT CATTLE.

For the best fat ox, cow or steer,	$20	For the second best,	12
		For the third best, vol. Trans.	

FAT SHEEP.

For the best wether,	$10	For the second best,	$5

For the third best, volume of Transactions.

Applicants for the premiums on fat cattle and sheep must furnish a statement of the manner of feeding the animal, the kind, quantity and cost of food, to entitle them to premiums.

ON HORSES—*Over four years old.*

For the best stallion,	$20	Best breeding mare & colt,	$20
For the second best,	12	For the second best,	12
For the third best,	8	For the third best,	8
For the fourth best, vol. Trans.		For the fourth best, vol. Trans.	

For best pair of matched horses, $15

For the second best,	$10	For the fourth best, volume of Transactions.	
For the third best,	5		

Three year old Studs and Mares.

For the best stud,	$10	For the best mare,	$10
For the second best,	5	For the second best,	5
For the third best, vol. Trans.		For the third best, vol. Trans.	

A variety of horses possessing size, strength and endurance for field labor, combined with that action which qualifies for the carriage or saddle; in short, the *horse of all work*, is probably the most profitable class which our farmers can now engage in rearing, and to such, therefore, will the preference of the Society be given.

SWINE—*Over ten mnnths old.*

For the best boar,	$10	Best breeding sow,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best, vol. Trans.		For the fourth best, vol. Trans.	

In awarding premiums on hogs, reference will not be had exclusively to size or to present condition, but to that form and that proportion of bone and offal to more valuable parts, which promises the greatest value from the least amount of feed.

SHEEP—I. Long Wooled.

For the best buck,	$10	For best pen of 3 ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best, vol. Trans.		For the fourth best, vol. Trans.	

For the best pen of 5 lambs, $5.

II. Middle Wooled.

For the best buck,	$10	For best pen of 3 ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best, vol. Trans.		For the fourth best, vol. Trans.	

For the best pen of 5 lambs, $5.

III. Fine Wooled.

For the best buck,	$10	For best pen of 3 ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best, vol. Trans.		For the fourth best, vol. Trans.	

For the best pen of 5 lambs, $5.

The term "long wooled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the "middle wooled," the South Down, the Norfolk, Dorset, Cheviot, native, &c. The "fine wooled," the Spanish and Saxon varieties of the Merino and some of their crosses.

FARM IMPLEMENTS.

For the best plow,	$50	Best threshing machine,	$20
For the second best,	30	For the second best,	10
For the third best,	20	For the third best, 2 vols. Tr.	
For the fourth best, vol. Trans.		For the best horse rake,	8
For the best subsoil plow,	20	For the second best,	5
For the best harrow,	8	For the third best, vol. Trans.	
For the second best,	5	Best fanning mill,	8
For the third best, vol. Trans.		For the second best,	5
For the best cultivator,	8	For the third best, vol. Trans.	
For the second best,	5	For the best straw cutter,	8
For the third best, vol. Trans.		For the second best,	5
For best grain & seed drill,	8	For the third best, vol. Trans.	
For the second best,	5	Best improved ox yoke,	5
For the third best, vol. Trans.		For the second best, vol. Tr.	

Implements not presenting any new and valuable improvements will not be entitled to premiums. Implements and machines must be tested as far as possible, in the presence of the committee.

BUTTER AND CHEESE.

For best sample of butter, not less than 80 pounds,	$20	For best sample of cheese, not less than 100 lbs.,	$20
The second best,	12	The second best,	12
The third best, 2 vols. Trans.		The third best, 2 vols. Trans.	

The butter offered for premiums must be presented in butter tubs, jars or firkins.

The claimants for premiums on butter, must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese is made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of the cheese afterwards.

MAPLE SUGAR—50 POUNDS.

The best specimen,	$15	The third best,	$5
The second best,	10	The fourth best, vol. Trans.	

Applicants for the premiums on maple sugar will be required to furnish a statement of the manner of making and clarifying the sugar.

CORNSTALK SUGAR.

For the best experiment in the manufacture of sugar from cornstalks, from one acre of northern corn cultivated for the purpose, and the juice extracted by iron rollers so as to obtain the maximum quantity of sugar; with a full account of the process and expenses, $100·00

ON SILK.

Best half bushel cocoons,	$15	For the third best,	$5
For the second best,	10	For the fourth best, vol. Trans.	
For the third best,	5	Best specim'n manuf. silk,	15
For the fourth best, vol. Trans.		For the second best,	10
Best pound of reeled silk,	15	For the third best,	5
For the second best,	10	For the fourth best, vol. Trans.	

SILK REEL.

For the best,	$10	For the sec'd best, vol. Trans.	

DOMESTIC MANUFACTURES.

Best pr. woolen blankets,	$5	For the best hearth rug,	$3
Best 10 yd's of flannel,	5	Best 12 yards Kersey,	3
Best 12 yd's ¾ woolen cloth	5	Best 15 yards rag carpet,	3
Best 15 y'ds wool carpet,	5	Best 15 yards tow cloth,	3
Best do'ble carpet coverlet	5	Best pound sewing thread,	2
Best ten yards linen,	5	Best pair knit stockings,	1
Best 12 yards linen diaper,	5	Best pair wove stockings,	1

ON VEGETABLES.

For 6 best stalks Celery,	$2	2 best purple egg plants,	$1
3 best heads Cauliflower,	2	Best h'f peck Lima beans,	1
3 best heads Broccoli,	2	Best h'f peck Windsor do.	1
12 best white table turneps	1	Best bunch double parsley	1
For the 12 best Carrots,	1	For the 3 best Squashes,	1
For the 12 best table Beets	1	For the largest Pumpkin,	1
For the 12 best Parsneps,	1	12 best ears seed corn,	1
For the 12 best Onions,	1	Best h'f p'k table potatoes,	2
3 best heads of Cabbage,	1	For the 2d best half peck table potatoes,	1
For the 12 best Tomatoes,	1		

Best variety Seedling Potatoes, $5.

Discretionary premiums will be awarded on choice garden products not enumerated above.

ON FRUITS.

For the greatest variety of table Apples, $5.

For the second greatest,	$3	For the third greatest, vol. Tr.	

For the best twelve sorts, not less than three of each, $3.

Best new Seedling Apple, $5.

For the greatest variety of table pears, $3.

For the second greatest,	Vol. Transactions.
For the greatest variety of Winter Pears,	" "
For the best twelve Quinces,	" "
For the best twelve Peaches,	" "
For the best twenty-four Plums,	" "
For the best six bunches of native Grapes,	" "
For the best six bunches of foreign Grapes,	" "

ON FLOWERS.

For the greatest variety and quantity, $5.

For the second greatest,	$3	For the third greatest, vol. Tr.	

For the best Floral Ornament, $5.

For the second best,	$3	For the third best, vol. Trans.	
For the best S'dl'g Dahlia,	$3	For the second best,	$2

For the best twenty-five varieties of Dahlias, $5.

For the second best,	$3	For the third best, vol. Trans.	

PLOWING MATCH.

First premium,	$15	Third premium,	$5
Second premium,	10	Fourth premium, vol. Trans.	

Each competitor will be required to plow one-fourth of an acre of sward land in 75 minutes; the furrows not to be less than 12 inches wide and 6 deep—plowman to drive his team.

FIELD CROPS.—(*At the Winter Meeting.*)

Best crop of wheat, not less than two acres,	$15	The third best, 2 vols. Trans.	
The second best,	10	Best crop Indian corn, not less than 2 acres,	$15
The third best, 2 vols. Trans.		The second best,	10
Best 2 acres spring wheat,	15	The third best two vols. Trans.	
The second best,	10		

For the best crop of Barley, not less than two acres, $10.

The second best,	$5	The third best, vol. Trans.	

For the best crop of Rye, not less than two acres, $10.

The second best,	$5	The third best, volume Trans.	

For the best crop of Oats, not less than two acres, $10.

The second best,	$5	The third best, volume Trans.	

For the best crop of Potatoes for the table, not less than one acre, $10

The second best,	$5	The third best, volume Trans.	

For the best crop of Potatoes, quantity considered, not less than one acre, $10

The second best,	$5	The third best, volume Trans.	

For the best crop of Sugar Beets, not less than half an acre, $10

The second best,	$5	The third best, volume Trans.	

For the best crop of Mangel Wurzel, not less than half an acre, $10

The second best,	$5	The third best, volume Trans.	

For the best crop of Ruta Baga, not less than one acre, $10.

The second best,	$5	The third best, volume Trans.	

The best crop of Carrots, not less than one acre, $10.

The second best,	$5	The third best, volume Trans.	

The best crop of Peas, not less than one acre, $10.

The second best,	$5	The third best, volume Trans.	

Those who present claims to premiums for farm crops, must state in writing the following particulars:—The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor.

ESSAYS.

(*For publication in the next volume of Transactions.*)

For the best essay on the different varieties of wheat,	$20
For the best essay on the diseases and insects injurious to the wheat crop,	20
For the best essay on subsoil plowing; with the results of actual experiments in the State of New-York,	20
For the best essay on the introduction and culture of new agricultural products,	20
For the best essay on the diseases of silk worms in this climate, and the means of prevention and cure,	20

DISCRETIONARY PREMIUMS

Will be awarded for such implements and products not enumerated above, as shall be deemed worthy of notice and encouragement.

RULES AND REGULATIONS.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on Dairy Cows, Fat Cattle and Fat Sheep, Butter and Cheese, Field Crops, and Sugar.

The statements required from those who compete for field crops, must be sent to the Recording Secretary, Albany, previous to the 1st of January, 1844, and the premiums will be awarded at the annual meeting of the Society, on the third Wednesday of January.

All premiums will be paid in cash or plate, at the option of the winners.

The premiums for Essays and for Agricultural Implements, will be open to the United States; but all others will be confined to residents of this state, who are members of this Society, or who may become so by the payment of one dollar on entering their articles.

Competitors for the premiums on Essays, must forward their manuscripts to the Recording Secretary, at Albany, previous to the 1st of January, 1844, free of postage.

☞ Particular rules and regulations of the exhibition, together with the list of awarding committees, will be published hereafter.

CHEMICAL ANALYSIS OF INDIAN CORN.

Foreign chemists have furnished us with the analysis of most of the articles used as food, but no analysis of maize has yet appeared; and to Americans, there is no substance of which an accurate analysis has been more desired. This has now been done by Dr. Dana for the New-England Farmer; and for the purpose of comparison, ruta bagas and potatoes added. The great difference of what Dr. Dana calls the fat forming principles in favor of corn, will excite but little surprise in those who have witnessed the effects of the several substances on animals, and will go far to establish the position assumed by Payen and Boussingault, (for which see another part of this No.,) that plants are valuable for giving fat to animals, only in proportion to the vegetable oils ready formed such plants contain. Now corn is known to be one of the richest in oil, and as a natural consequence should possess the most active fattening powers. We copy the table of Dr. Dana from the N. E. Farmer.

100 lbs. of	*Corn.*	*Ruta Baga.* fresh dug.	*Potatoes.* fresh dug.
Contain of flesh forming principles: Gluten, albumen, &c.,	1·26	1·	2·07
Fat forming principles: gum, starch, sugar, woody fibre, oil, &c.,	88·43	13·	24·34
Water,	9·	85·	72·
Salts,	1·31	1·	1·39

COST OF KEEPING HORSES.

The city weigher of Boston has furnished the Massachusetts Plowman the following table of the quantity of hay, straw and grain used at the city stables during the year 1841, for 49 horses. Such tables are useful, as placing the great points of expense in a clear light. Common farmers are not generally able to ascertain the actual cost of keeping animals; but where all the food is purchased, and accurate accounts rendered, the difficulty does not exist. It appears to us that the expense per week is slightly greater than has been made in some former reports.

Hay, 186,267 lbs., which cost	$1,787 63
Straw, 24,850 " "	133 15
Meal, 3,500 bushels, at 75 cents,	2,520 00
Oats, 1,555 " 50 "	777 50
	$5,218 28

Averaging for each horse per week:

Hay,	73 lbs.
Straw,	10½ "
Grain, about	2 bushels.

Cost per week of keeping each horse, $2,04 4-5, or about 29½ cents per day.

NOTICES OF NEW PUBLICATIONS.

Transactions of the New-York State Agricultural Society, together with an Abstract of the Proceedings of the County Agricultural Societies for the year 1842.

THIS Report of the State Society, being the second volume of the Transactions, makes a volume of upwards of 400 pages; and we have no hesitation in saying that in the general value of the papers, and the extent of information embraced in them, it will be found superior to its predecessor, and equal at least to any work of a similar nature yet published in this country.

It embraces the Annual Report of the Executive Committee of the State Society; the Addresses of Governor Seward and President Wadsworth; Reports of Committees and Awards of Premiums at the October and the annual meetings; Prize Essays on Manures, Farm Management, and Designs for Farm Buildings; papers on the agriculture of some fifteen of the counties of the State, of Indiana, and of Maryland; papers on various agricultural topics from J. M. Weeks, C. N. Bement, D. Thomas, R. Harmon, J. H. Hepburn, George Randall, H. S. Randall, J. J. Thomas, S. W. Jewett, W. Chapman, T. Mellen, H. H. Hopkins, Holkham, and A. Walsh; and Reports and Transactions of thirty-two of the County Agricultural Societies of the State. We should be happy to make liberal extracts from many of these papers and reports, and shall doubtless have occasion to make frequent reference to them hereafter; at present, we have only room for the following table, which we have compiled from the County Society returns. We regret that the imperfection of some of the returns has not permitted this abstract to be as perfect as we should have desired. It only embraces some of the principal premium crops, of which returns were made. Fractions are omitted.

Name of Society.	*Wheat.*	*Corn.*	*Barley.*	*Oats.*	*Potatoes.*	*Turneps.*	*Carrots*	*Beets.*
Chemung Co. Ag. Soc.,	22	99	..	..	806	..	..	..
Clinton "	..	..	..	66	..	..	..	..
Dutchess "	30	107	..	..	376	700	..	990
Delaware "	33	73	..	67	402	1232	..	..
Erie "	..	57	42	67	..	1000	1124	1280
Greene "	..	97	..	87	..	..	..	866
Kings "	40	72	..	..	..	..	..	..
Madison "	32	117	..	..	..	..	..	..
Monroe "	..	82	46	91	400	..	630	955
Niagara "	52	107	57	..	..	..	..	..
Oneida "	31	95	64	112	678	..	..	..
Onondaga "	..	96	..	..	419	..	..	..
Orange "	..	102	..	77	360	..	..	..
Oswego "	29	89	..	..	338	500	648	..
Otsego "	22	78	55	84	320	..	..	..
Saratoga "	29	137	..	..	366	..	..	..
Suffolk "	..	80	..	..	368	..	..	..
Tompkins "	26	107	46	..	406	..	..	1724
Washington "	29	80	..	97	510	..	..	..
Wayne "	30	99	..	67	376	1098	.	..

This table exhibits in a striking manner what our soils are capable of when manured and cultivated as land should be. There is no mystery in the production of 100 bushels of corn, 40 of wheat, 50 of barley, 400 of potatoes, and so of other crops. Heavy manuring and careful cultivation are the things wanted; less land and better crops; or, if we will hold on to our hundreds of acres, more capital employed in their tillage.

The paper on sheep breeding by Mr. Jewett will well repay perusal. He has accompanied it by a capital portrait of one of his stock Merino bucks, and from which last June he sheared thirteen and one-fourth pounds of washed wool, it being his third fleece. By the way, we are informed in a private note from Mr. Jewett, that his celebrated Paular Merino buck, a portrait of which has appeared in a former volume of the Cultivator, is to be sent into one of the central counties of this state the ensuing summer, where, we doubt not, it will be properly appreciated.

We congratulate the public on the appearance of this volume of the Transactions. It contains the most ample evidence of the deep hold the cause of agricultural improvement has taken, and of the benefits which are flowing from the well timed and well appropriated aid received from the state, and will form a valuable contribution to the permanent agricultural literature of the day.

JOHNSTON'S FARMER'S ENCYCLOPEDIA.—We procured a copy of this costly English work at the time it was published, and think it an excellent manual of agriculture. We are glad, therefore, that Messrs. CAREY & HART have commenced its publication in a cheap form, and with such additions and alterations as to better adapt it to the wants of the American agricultural public. There is in some quarters a most unworthy prejudice against all foreign farming; but we venture to say there is not a farmer in the United States that cannot derive many useful hints and much valuable information from this Encyclopedia; and when we recollect that this improved edition costs only four dollars, or about one-third the price of the English edition, we cannot doubt it will receive a liberal support. It is published in semi-monthly numbers, has numerous wood cuts, sixteen beautiful plates, and will be completed in 16 Nos. at 25 cents each.

TRIP TO OREGON.—We have read with much interest Mr. Farnham's account of his journey from Missouri to the Pacific, just published in a cheap and neat form at the Tribune office, New-York. If there is a country in which desolation runs riot, it must be in that which travellers are obliged to cross in this journey to the far west. Still among these mountains and deserts there are a few spots of the most interesting and inviting kind. Such a one is described at page 54, in the valley of Grand river: "The glades that intervened were more beautiful than I had seen. Many were covered with a heavy growth of timothy or herdsgrass and red top, in blossom. Large tracts in the skirts of the timber were thickly set with sweet sicily. The mountain flax was very abundant. I had previously seen it in small parcels only; but here it covered acres as densely as it usually stands in fields, and presented the beautiful sheet of blue blossoms so grateful to the lords of the plow. I had noticed some days previous, a few blades of the grasses just named, standing in a clump of bushes, but we were riding rapidly, and could not stop to examine them, and I was disposed to think that my sight had deceived me. What! the tame grasses of Europe, all that are the most valuable for stock, the best and most sought for by every intelligent farmer in christendom; these indigenous to the vales of the Rocky Mountains? It was even so." Those who love adventure, and those who wish for a faithful account of that distant part of the United States, will read Mr. Farnham's book.

"THE HONEY BEE."—Messrs. CAREY & HART, Philadelphia, have issued a cheap edition of "The Honey Bee: its natural history, physiology and management, by Edward Bevan." It is a closely printed octavo, of 128 pages, with about thirty engravings of plans of hives, &c., all for 31 cents. Every bee-keeper should have a copy, and we particularly recommend it to our correspondent, Mr. Palmer of New Marlboro'.

AMERICAN ECLECTIC AND MUSEUM OF FOREIGN LITERATURE.—A large portion of our literature is derived directly or indirectly from foreign sources, and principally from their periodicals. With many valuable papers, they contain much that is most pernicious and worthless, and the separation of the wheat from the chaff is imperiously demanded. The most successful effort to perform this, is effected in the work before us, which is published in monthly numbers of 144 pages each, at $6 per annum; J. H. Agnew of New-York, editor. The elevated character and high moral tone of the work, should insure it a large circulation.

NORTH AMERICAN REVIEW, *April*, 1843.—This No. contains its usual supply of valuable reading articles; among which are papers on the Exploring Expedition, Muller's Elements of Physiology, Alison's History of Europe, and the Treaty of Washington. The reasoning of the German physiologist on the subject of the production and organization of those singular animals, the Entozoa and animalculæ, will attract the attention of the curious. Is philosophy about to disclose the line that separates animal from vegetable life, or show that they usually blend and run into each other?

SILLIMAN'S JOURNAL FOR APRIL.—This number is full of interesting papers. Among them is a Notice of the Life and Labors of De Candolle, "the Linnæus of our age," whose death occurred in 1841—Superban Geology, or rocks, soil, and water, about Richmond, Ind., by Dr. J. T. Plummer—A Catalogue of the Birds of Connecticut, by Rev. J. H. Linsley, together with articles by Professors Gardner, Litton, Salisbury, Locke, and Messsrs. Lockwood, Dove, Tuomey, Owen, Hildreth, Taylor, Redfield, Hayden, Buckley, &c., and a notice of the great comet of the present season, by Prof. Silliman.

AGRICULTURAL CLUBS.

A FARMER'S CLUB has been formed by our friends near Wilmington, Del., on a somewhat novel plan. It consists of twelve members only, who meet on the first Tuesday of each month, at the house of one of the members in rotation, at 10 o'clock, A.M., when "an examination," says the Delaware Gazette, "is made by the club of all that pertains to the farm, stock and cultivation of their host—his fields, his fences, farming utensils, mode of applying manure, rotation of crops, &c., &c. The conveniences and accommodations of his farm house, barn, piggery and poultry yard, are all matters of observation and discussion. At an early hour a plain farmer's dinner tests the thrift and cookery of his *better half*—her bread and butter, her savory meats and pies, well fatted poultry, her cheese, milk and cream, rich, fresh and cool from the just admired dairy, all afford practical themes at the dinner for discussion of their merits, and of woman's worth; as far as practicable, the products of the farm are required to be used for this part of the entertainment. Politics and political matters are at no time alluded too or admitted. After dinner, agricultural subjects are discussed and experiments reported; agricultural works and journals exchanged, noxious weeds noticed, and all the agricultural improvements and publications since the last meeting are passed upon and reviewed—seeds, plants, new grains, &c., distributed—the entertaining member for the next month is agreed upon, and the club adjourns, *always early* to attend to the *feeding and foddering at home,* before dark. The gentlemen who compose this club, consist of Messrs. Bryan Jackson. C. P. Holcombe, John W. Andrews, Jesse Gregg, Samuel Canby, Henry Dupont, J. Boies, J. W. Thomson, Francis Sawden, William Boulden, George Lodge, and Major Joseph Carr."

HOT AIR FURNACE.—A subscriber wishes to know the cost of the hot air furnace, stove, drums, grates, and other fixtures, manufactured at Palmyra, N. Y. Will J. J. T. inform us?

MR. COLMAN'S TOUR.

OUR readers will be gratified to learn that Mr. Colman's proposed visit to Europe, for the purpose of making an agricultural survey, has been received with such favor as to warrant the undertaking. The subscription to his work, which now amounts to upwards of 2,000 copies, embraces the following, the several societies having subscribed for it with the view of distributing the volumes as premiums:

New-York State Ag. Society, New-York,	for	100	copies.
Massachusetts Ag Society, Massachusetts,	"	100	"
Worcester Ag. Soc., Worcester co., Mass.,	"	40	"
Philadelphia Ag. Society, Pennsylvania,	"	40	"
American Institute, New-York city,	"	40	"
Essex Ag. Society, Essex county, Mass.,	"	25	"
Mass. Horticultural Society, Boston,	"	25	"
Monroe Ag. Society, Monroe co., N. Y.,	"	25	"
Livingston Co. Ag. Society, Geneseo,	"	10	"
Berkshire Co. Ag. Soc., Pittsfield, Mass.,	"	10	"
Hampshire, Hampden, and Franklin county Agricultural Society, Northampton,	"	10	"

Two gentlemen have subscribed for 100 copies each.

One	do	do	50	"	
Twelve	do	do	25	"	"
Eight	do	do	10	"	"
Forty	do	do	5	"	"

Having completed his arrangements for the publication of his work, the first part of which may be expected about the first of January next, Mr. Colman sailed from New-York on the 6th of April, in the packet ship Independence, Captain Nye. He contemplates an absence of two or three years. In the mean time, his work will be published in parts, at Boston, by his general agent, Mr. ARTHUR D. PHELPS, at intervals of two or three months, until the whole is completed.

We anticipate the happiest results from this mission of Mr. COLMAN. He goes abroad under the most favorable circumstances, having the aid and countenance of Mr. Webster, Secretary of State, and Mr. Everett, minister to St. James, both of whom are his personal friends; while his high character and his intimate acquaintance with the agriculture of his own country, will make him an able exponent of its interests, and every where a most acceptable guest. These advantages, with his happy tact of collecting and arranging facts, will enable him to give the American farmer a work of the highest value. That it will be waited for with impatience, and received with gratification, we cannot doubt.

FAT IN ANIMALS.

THE recent demonstration by Liebig that plants furnish, ready formed, all the essential elements of animal matter, such as the fat, albumen, and fibrine, has to all appearance very greatly simplified the processes by which animals are fattened. Formerly it was necessary to suppose a variety of changes which the food must undergo, previous to its conversion into flesh or fat; now, simple appropriation of substances already formed, and in reality requiring no change, is all that is required on the part of the animal.

Messrs. Payen and Boussingault have lately been conducting a series of experiments to test the principles of the German philosopher, in which they find no cause of dissent, so far as the presence of the several constituents of flesh in the food is concerned, though they express some doubts as to the fact that no more fat is formed in the animal than is taken with the food. Messrs. P. & B. have endeavored to determine the fattening power of maize. Farmers have long known that corn contained fat or oil; accurate experiment proves that it amounts, in good corn, to 9 per cent. A lean goose was fed 24 lbs. of corn, when it was killed, and 3½ lbs. of fat taken from it. Allowing it to have contained at first 1¼ lbs. of fat, it had gained from the corn 2½ lbs., which is very nearly the proportion the 24 lbs. of corn would have furnished. Hay is found to contain about 2 per cent. of fat. The fattening ox, and the milch cow, always furnish less fatty matter than their food contains. There is no process by which the fat, fibrine and albumen of plants, can be so fully extracted, and prepared for use, as is done by the milch cow. These are furnished in the milk; the fat given off in the butter, and the fibrine and albumen in the remaining milk. The French chemists are preparing their researches for the public, and every step in the progress of chemical analyses will be looked for with interest.

VITALITY OF SEEDS.—It is stated in some of the English newspapers, that in consequence of some new arrangement of part of Bushy Park, a parcel of ground which has been undisturbed since the time of Charles I., was plowed up last winter. In the spring, a plentiful growth of mignionette, pansies, and wild raspberries, none of which grow in the neighborhood, shot up spontaneously. It is inferred that these seeds had remained in or on the ground for that term of time, retaining their germinating powers, and only requiring to be covered by the plow to vegetate. Raspberry seeds taken from an urn, of the age of the Roman occupation of Britain, have vegetated freely; and wheat from the mummies of Thebes, some 3,000 years old, is now flourishing in the Jarden des Plants.

WOOD'S PATENT PLOW CULTIVATOR.—We have been favored with a cut of this valuable cultivator, which will appear next month. It is manufactured by R. B. Doxtater, Adams, Jefferson co., N. Y., and is for sale by Messrs. Starbuck & Sons, Troy, and Mr. Thorburn in this city.

EFFECTS OF THE PAST WINTER.

Never since we commenced publishing an agricultural journal, have we received such distressing accounts of the sufferings of stock consequent on prolonged cold weather and scarcity of fodder, as have reached us during the past month from various parts of our country. In spite of the greatest efforts, and the dividing with their cattle the grain reserved for their families, many farmers have lost large portions of their animals, and the remainder are in such a wretched condition, that no small part of the summer will be required to restore them to the state in which the winter overtook them. These results may be attributed to several causes; some of which were without our control, while proper precaution and forethought would have remedied the others. We call the attention of our farmers to these matters now, in the hope that the severe lesson so many have received, will, by inducing the necessary precautions hereafter, prevent such accumulated disasters.

One of the causes to which we have alluded as beyond our control, is the great length and extreme severity of the past winter. Most farmers began to fodder their stock by the middle of November, and up to the middle of April, or indeed to the present time, there has not been the cessation of this labor for a single day, or at least one in which supplies of food were not necessary. All farmers are aware that the quantity of food consumed by stock in a given time, is greatly depending on the temperature; the colder the air, the greater the quantity of food required and consumed. The almost unprecedented cold and storms of February and March, have caused a consumption of fodder for which farmers were not prepared; and the heavy bodies of snow which covered the country till the middle of April, prevented the animals from gleaning those scanty supplies which, had the ground been bare, might have enabled them in some cases to sustain life. Another cause beyond our control, was the inferior quality in general of the fodder provided by the farmer for winter use. In a considerable part of our country great dependence is placed on the straw of the smaller grains for keeping cattle and horses not required for labor, and the straw of last harvest was, as all know, of the worst quality. The most of the hay too, although saved in tolerable condition, had been immediately previous to cutting so washed and soaked by the heavy rains, that its nutritive qualities had been much diminished. It was a common remark among experienced farmers that the hay crop of 1842 "could not spend well;" and the result has proved they were correct. So far, the farmers cannot be held responsible; not so, however, for the causes of scarcity and distress which follow.

And first, many farmers were overstocked. Some were sensible of this; they knew so far as fodder was concerned "they were short," but they could not think of selling at such low prices; and besides, there might be an *open* winter, which would enable their animals to get a living by hook or by crook. We cannot think such men can be viewed in any other light than that of criminals.

Secondly; many farmers had taken no pains, or been at no expense to render their animals comfortable. The farmer who understands his true interests, who is aware of the vast saving that is made in the quantity of fodder by warm comfortable yards and stables, and provides them accordingly, is rarely obliged to put his animals on short allowance, or invite his neighbors to help set them on their legs in the spring. The farmer whose barns are without yards or stables, who relies on rail fences to keep his hay from blowing away, whose animals spend the long winter nights shivering on the lee side of a stack, or a snow drift, must expect to find his stock of fodder failing, and his animals in such a condition that his neighbor the tanner may safely calculate on their hides.

There is another serious fault justly chargeable on most farmers, and that is, not feeding out the winter food of their animals, in the best and most economical manner. A very large proportion of their fodder is wasted, by being fed in such a way that the animal is unable to convert it into food. Cornstalks constitute one of the most nutritive kinds of food, yet when the farmer saves them at all, two-thirds of their real value is lost in feeding; the animal can eat nothing but the leaves and the smaller parts of the stalk, while the large part that contains the most nutriment of the whole is necessarily rejected. A cutting machine, by converting these large stems to chaff, would give many an excellent meal to animals, which is now lost to them. So with coarse clover. Animals will almost as soon eat bean poles as clover stems, but reduce the whole to chaff, and it is alike grateful and nutritive. Straw should always be cut; and if a little brine is sprinkled over it, it will be more readily eaten.

But if it is too late to correct the errors of the past year we can now begin to take measures to prevent their repetition. It is so much better to have a little more than enough, that the farmer is inexcusable who does not take warning by the lessons of the past winter, and make liberal arrangements to secure his stock against the sufferings and casualties to which they are exposed. Let no one depend entirely on hay and straw. Even if he has enough of these, there are other things that should be added, to secure continued health and good condition. All animals should have some green food with the dry; potatoes, turneps, or carrots, with the hay and straw. The farmer should have enough of these to furnish a small quantity daily to every animal; and to do this his calculations must be made in season. There must be planting, cultivating, and harvesting, before they can be had for stock, and roots require the most of the season for their perfection. Let farmers, too, who have struggled through the winter with much difficulty, and wish to guard against the recurrence of such trouble, plant or sow an acre or two of corn, not for soiling, (though it should not be neglected for this purpose,) and when at its full growth, cut it and cure it for winter use. Numerous experiments prove that, on good land, six tons of cured stalks may be considered certain; and if so, there are few ways in which so much good fodder can be secured from an acre. In any event, the farmer can reduce his stock in the fall to the standard of his food; and he should do so, until there is an absolute certainty he is on the safe side. Straw cutters and stalks will greatly lengthen out his stock of fodder, and no man ever has cause to regret his expenses in preventing suffering, or adding to the comfort of his domestic animals.

HINTS FOR MAY.

The unusual duration of the winter, has, in the north, so far retarded spring work as to throw its various operations together, and render necessary a greater economization of time than usual. Farming operations must be planned with reference to this fact, and the work first needed must be first performed.

Spring wheat must be sown early, or there is little use in sowing it at all; the ground should be clear, otherwise the weeds will get the start of the slower germinating wheat.

Barley and oats may be sown later. Where these crops are grown on lands infested with the thistle, (a bad practice by the way,) the sowing should be delayed until the ground is warm and in fine condition, that the check given the weeds by the last plowing may enable the seeds to germinate and the plants get start of the weeds. If this is done, the thistle will do little injury, comparatively, to the crop.

If your work does crowd, do not plant your corn unless your field is properly fitted for that crop. Better not plant corn at all, than to plant on exhausted, imperfectly prepared land, and after all your labor find your crop a failure. On a majority of our soils, 30 bushels an acre will not pay the cost of cultivation. By adding a little more expense, in manure and preparation, you may get from 60 to 80.

If your soils are heavy clay, do not suffer yourself to be tempted to plow them while wet. In doing this you may inflict an injury to them, which it will require years to remove. In the facility of working at all times, soils inclining to be light have the advantage of all others; but where clay prevails in its character, the plow converts the wet surface of the furrow slice, as well as the bottom of the furrow, to mortar; and till broken up and pulverized by frost or otherwise, such soil is unfit for any crop.

If you sow grass seeds with your spring crops, put them on liberally, and they will succeed better if the roller is passed over them after sowing. Stinting the supply of seeds, is miserable policy.

Dont forget to use plaster on your clover. Applied to newly sown clover, it ensures it against failure in nearly all cases; and on well rooted plants, it adds greatly to their vigor and their quantity. We have used it on peas with great success.

If when planting corn you put a handful of a mixture of two parts of plaster, and one part of ashes in the hill, it will leave a good effect on the crop.

The garden must come in for a share of your attention this month. There is an idea quite prevalent among farmers, but a mistaken one, that work in the garden is thrown away. The vegetable garden is an important part of the farm; the flower garden must be consigned to the wife and the daughters, and they will show their good sense and good taste, in not allowing this to be neglected.

CULTURE OF THE POTATOE.

It is found by experience, that in addition to the fertility or richness of soil indispensable for the profitable growth of any crop, the potatoe demands for its perfection a considerable degree of moisture and a bed for tubers so light that their growth may be unobstructed. A sandy soil is sufficiently light, but it is most commonly too dry; clay soils are moist enough ordinarily, but they are too heavy and compact. The best soil for potatoes is one that contains a large quantity of vegetable matter combined with the earths. Thus muck lands rarely fail of producing good potatoes, where water is not too abundant. Maine and Nova Scotia are justly celebrated for their potatoes; the newly cleared lands abounding in muck, and the climate insuring a supply of moisture. On a sandy soil, the potatoe should be planted in furrows, so that the roots may be below the general level of the earth, and hilling should be dispensed with; where the soil is inclining to be heavy, or moist, the potatoes should be above the level, and hilling must be resorted to; not those little sharp cones of earth some call potatoe hills, but made as broad on the surface as the distance between the rows and the proper working will admit. There is no necessity for the tubers being buried deep in hoeing or in growing; it is enough if they are fully excluded from light and air. Where potatoes are properly cultivated, the productiveness may generally be well guessed in autumn by the appearance of the hills, which will be evidently enlarged, and cracked in all directions.

We find in our foreign journals some notices of the culture of the potatoe, which our readers may find useful, particularly in clay soils, or those liable to suffer from drouth. Taking advantage of the well known fact that tanner's bark retains water very strongly, Prof. Voelker of Prussia, made some experiments with spent bark, and found that by covering his potatoe sets with two or three inches of this material before turning a furrow over them, he secured an abundant supply of moisture for the season, besides providing a loose, spongy bed for the young tubers. We hope some of our readers who have the means, will try the professor's method, since if it should succeed, a material which now has little value might be made useful to the agriculturist.

In order to obviate the difficulty arising from a dense clay soil, of poor quality, M. Auber of France, strewed liberally his potatoe sets with chaff made from rye straw, previous to their being covered with earth. As the results of experiments made for three years, he states that his crops have been most abundant and of the finest quality. This practice is one that could hardly fail of success in such soils; for if not as retentive of water as the tan bark, the clay soil renders the quality less necessary; and the material would furnish a fine corrective to a compactness fatal to a large potatoe crop.

NEW-YORK STATE AG. SOCIETY.

The regular monthly meeting of the Executive Committee was held at the Society's Room in the State Hall, on the second Wednesday of April—Vice-President Leland in the chair.

The subject of calling a meeting of breeders for the purpose of discussing and settling, if possible, upon some criteria for deciding upon the merits of neat stock, was called up in pursuance of a resolution passed by the Society at its last annual meeting. After considerable discussion, a committee, consisting of Messrs. F. Rotch, C. N. Bement, E. P. Prentice, Geo. Vail and L. F. Allen, was appointed to call a convention of breeders, to be held in the city of Albany at such time in July next as the committee should designate.

A model of a very ingenious Corn-planter, to plant two rows at a time, was exhibited by Mr. Pratt of this city.

Mr. Tucker reported that the Transactions of the Society would be ready for distribution in a few days, when, on motion it was

Resolved, That the Recording Secretary be authorized to make arrangements for having the copies of the Transactions, belonging to the Society, bound in the same style as the vol. for last year.

On motion of Mr. Tucker, it was

Resolved, That copies of the Transactions for the past year, be presented to each officer of the Society; to each life member, and to each person who had contributed $5 or more to the funds of the Society during the year 1842, and to each contributor to the vol. Copies were also ordered to be presented to several societies and editors of agricultural papers.

A room having been assigned for the use of the Society in the old State Hall, in connection with the Geological Museum, the Society will be glad to receive donations of scientific and agricultural works, models of implements, specimens of seeds, &c. &c. All parcels for the Society, may be addressed to the Secretary, Luther Tucker, Albany.

COUNTY FAIRS.

The Albany Co. Ag. Society will hold their Fair at the Bull's Head near this city, the first week in October. The list of premiums, rules, &c. will be published in our next paper. Teunis Van Vechten, President; Luther Tucker, Albany, Cor. Sec'y.

The Cayuga Co. Ag. Society holds its next Fair at Auburn, Oct. 11, 12. Its list of premiums is extensive, embracing a large number of mechanical productions of special importance to the farmer. J. M. Sherwood, President, and W. C. Beardsley, Secretary, Auburn.

The Cortland Co. Ag. Society hold their next Fair at Cortland Village, on the first Wednesday of Oct. next. About sixty of its premiums are to be paid in vols. of Agricultural papers. In addition to the usual business, this Society has appointed about twenty "Experimental Committees," who are to report on the various subjects allotted to them, and should these committees fulfil the duties assigned to them, a large mass of practical information of great value to the farmer, will be obtained. Amos Rice, Homer, Secretary.

The Ontario Co. Ag. Society have issued their list of premiums to be awarded at their next Fair, which is to be held at Canandaigua, Oct. 17 and 18. The Managers reserve the right to pay a part of the premiums in agricultural publications. Were a considerable portion of the premiums awarded by Ag. Societies to be paid in works of this kind, much more permanent good would be effected than by their payment in cash or medals, as in this way a large amount of useful information would be distributed throughout the counties, which could hardly fail to produce a highly beneficial influence upon our agricultural interests. John Greig, Esq. Canandaigua, is the President of this Society, and Oliver Phelps, of the same place, Secretary.

The Rensselaer Co. Ag. Society have issued an extensive list of premiums to be awarded at Lansinburgh, Sept. 27, 28. Among the premiums are three for the best, 2d, and 3d best farms in each town in the county. At the late annual meeting of this Society, Wm. P. Van Rensselaer, Esq. of Greenbush, was chosen President, John J. Viele, Cor. Sec'y, Lansinburgh.

CORN AND ROOTS.

We cannot forbear to urge upon our farmers the necessity of paying more attention to the cultivation of the two crops named at the head of this article. The severe lesson which so many of them have received who have relied on the ordinary methods of keeping their stock through our northern winters, should induce them to be on their guard against the recurrence of such calamities. Our domestic animals constitute a very large portion of the wealth of the country, and its loss should not be needlessly hazarded. The most distressing accounts of the loss of cattle, sheep, and swine, in the southern counties of the state, and in the states of Ohio and Michigan, continue to reach us, and it is evident the loss already suffered by farmers is immense. When the hay and straw failed, there was no resource; an acre of roots, or a few acres of corn, would in nearly every instance have averted the loss of stock, and in no event could the articles have been useless to the farmer.

Corn is one of the most valuable crops that can be cultivated by the farmer, and one that rarely fails if the ground is properly prepared, and a good selection of seed be made. In many districts of the north, early varieties must be chosen, or there may be a failure of its ripening; but where this is attended to, the crop rarely fails. The man who plants corn, must manure well and heavily, but he loses nothing by this, as corn is one of the best preparatory crops for those kinds of grain to which the application of fresh manures is injurious. We give to our readers two methods of the cultivation of this crop, the first practiced by D. Comstock of Raisin, Michigan, as described in the N. G. Farmer; and the second by Mr. Sweet of Tyringham, Mass., from the "Traveller."

"Mr. Comstock's soil is sandy, and he selects a clover ley, mowed the preceding years. On this he spreads 25 loads of barn yard manure to the acre. From the 10th to the 15th of May, it is turned under by furrow, about 9 inches deep; then about 25 loads of old ashes, scrapings of the hen house, chip manure, &c. are added; after which it is well harrowed lengthwise of the furrows, marked out, and planted with the large dent and red-blaze varieties of corn, in hills two feet apart, and rows three and a half feet apart, with from four to seven kernels in a hill, so as to secure three good stalks in each hill after weeding. When it comes up, a handful of leached ashes is put on each hill to check worms and grubs. The cultivator is passed through it three times, and it is hoed twice. Last year his corn so treated, yielded a little over 100 bushels of shelled corn per acre. Mr. C. also raised in the same field, two acres of sugar beet, which gave 1050 bushels to the acre."

We venture to affirm that Mr. Comstock's cattle have not this winter perished from starvation.

Mr. Sweet's method is as follows:—"He spreads what manure he intends for the field on the surface of the green sward; then he plows the land into ridges about three feet apart in the fall—each ridge or row being made of two back furrows turned upon a narrow strip of sward, which is not disturbed. In the spring, he rolls and harrows these ridges, and on the top of each ridge, 12 or 14 inches apart, he plants his hills of corn, three or four kernels in each hill, and cultivates his corn through the season with the hoe, cultivator, and plow, as much as he deems necessary. In this method, he remarked, he was not troubled with weeds or drouth. In the fall, as soon as the corn is ripe, he gathers the ears, then pulls up the cornstalks, and lays them down lengthwise between the furrows, and then splits the ridges with his plow, and covers these stalks completely up. This is made his ridge for his second crop of corn, to be planted the succeeding spring. He has raised 110 bushels of corn per acre, planted over these buried stalks."

These buried stalks may aid in producing a good crop of corn, but the practice is unquestionably a bad one, as the cornstalks if cut and fed to animals, would go far in wintering stock, and the manure so made, would doubtless be as effective as the buried stalks would be. Every farmer may not reach 100 bushels per acre, but from 60 to 80 may safely be calculated upon; and every farmer can estimate for himself, the value of the grain and the fodder so produced, for the feeding of animals. Corn, for feeding stock, should always be ground, corn and cob together; in this way its value is greatly increased, and this meal mixed with cut straw or hay, is one of the best kinds of food an animal can receive.

Roots too, have not received from the great mass of our farmers, particularly those whose main dependence is on stock, that attention they deserve. Had every farmer relied less on his hay, and grown only an acre of roots, millions of dollars now lost to the country would have been saved, and an incalculable amount of suffering prevented. It may seem absurd to some, to talk of suffering, as applied to animals, but we consider that man as guilty of crime, who needlessly exposes his animals to privation and pain. A man has no more right to starve his stock, than he has to starve his children; his animals were not given him for such a purpose; and the attempt to keep more than can be kept well, deserves the severest reprehension.

Of roots, valuable for animals, and which may be grown to advantage, we may name potatoes, Swedish turneps or ruta baga, carrots, and the sugar beet. The root crop most certain is the potatoe; but it rarely equals in the quantity of bushels produced per acre, any of the others; and as there does not appear to be any material difference in their value when fed raw, (the carrot excepted, which is the best,) some of the other should in ordinary cases receive attention from the farmer. The average of the potatoe crop will range from 150 to 200 bushels when well cultivated; and the average of the turnep, carrot or beet, under the same circumstances, will range from 400 to 600 bushels per acre. The potatoe crop occasionally rises to 400 or more bushels, but not oftener, perhaps, than the others to 1000 bushels per acre. A large proportion of our meadow lands do not yield more than two tons per acre, and it will require at least this amount to keep a horse or ox for five months, fed exclusively on hay. Now experience proves, that from one to three pecks of roots, according to the age and size of the animal, will keep them well and thriving, a handful of dry hay or cut straw being daily added; hence it is certain than an acre of land in roots will keep four or five times as many animals as one in meadow. Most farmers will admit this; but say they cannot cultivate roots, as it requires so much more labor than to make hay. Very well; but then they should keep no more animals than their hay will keep well, and have plenty of food at all times. But we have usually found that those who are the least familiar with the cultivation of roots, are the most loud in their complaints as to the labor; and as in most other cases, experience will be found to greatly facilitate the production, as well as lessen the labor demanded.

ROADS.

There are few matters of equal importance to the farmer, that receive so little attention from him as the subject of roads. He is taxed a certain sum to be expended on the highways, or he is assessed a certain number of day's works to be performed in making or repairing the roads, and when this sum is paid, or this tax worked out, he seems to think all is done that is necessary, or that he can do, to remedy existing evils and secure good roads. This is not the case: there is no one so much interested in good roads as the farmer, and there is no one who should better understand the subject than he. Old methods should be discarded if better ones can be found, and a little calculation will be found as effectual as all work without forethought or proper direction. There are many of our roads that are most unskillfully and wretchedly laid out. This is particularly the case where the roads were made when the countries were new, and the character of the country or the soil, could not be understood. The proper location and construction of a road, not unfrequently lessens the draft between two points, 100 per cent; and we may well believe that were our beasts of burden consulted in the matter, they would prefer a road with some slight deflections from a right line, or which was lengthened in a slight degree, to one carried directly across hill and valley, without the least reference to inclination or slopes, but only to straight lines.

Nine-tenths of the farmers in the country, reside at distances of from 10 to 20 miles from their market places; and the marketing a load of grain, or other products, will in most cases consume a day. Now if by improvement of the roads, the farmer is able to transport 40 bushels of wheat, where before he could carry but 20, or other products of the farm in proportion, it is easy to see what a saving of time and labor will be effected. There are few farms of 100 acres, which will not furnish from 40 to 50 loads of marketable matters in the course of the year, and a saving of one-third the time required for this purpose, which will be made where the roads are good, will constitute no small item of improvement or profit in the farm. If to this is added the wear and tear of wagons, harnesses, and horses, the difference to be shown between good and bad roads, will not be less than one-half the expense of transportation.

In the construction of roads, two methods have been generally adopted in the country. The first is what is called the turnpiking system, in which, in most cases, the surface earth is drawn from the sides into the middle of the road, rounded off, and left for the carriage road. If, as country roads are generally made, this rounded part is only wide enough for one track, ruts will soon be made in this surface mold, water will penetrate, and the road in the spring and fall, muddy and intolerable. The other method is to plow ditches by the sides to keep off surface water, and then have the central part of the road with a surface level, or but slightly inclined to the sides. This gives a better road track than the other, less liable to form into deep ruts, and preferable in other respects, but unless the soil and the materials of the road are good, this method will be found faulty and objectionable.

To make a good road, it is necessary in the first place that it should be dry. In some places the soil will be naturally so porous that no surface or standing water can be found. Where this is the case, road making is easy; it requires nothing more than to grade or level the track, clearing away the surface earth or vegetable mold, and giving a proper inclination to the pathway. But in most soils, if no more than this is done, the roads will be for a considerable part of the year muddy, rough and uneven, and unfit for the transportation of loads. The making the bed for the road dry, is the first thing to be done on such soils. Drains to remove springs; ditches to allow the surplus water to flow off readily, and the placing the driest soil for the track, will be required. It is idle to think of a passable road in such a country of rains and frosts as ours, unless freedom from water is first secured.

In the second place, the form of the road should be such as will give the smoothest surface. Where a road is so narrow as to force all the travel upon a single track, it is scarcely possible the track should remain smooth for any length of time; it is consequently better to have the crown of the road wider, and the level part suitable for wheels more extensive. In this way, neither horses nor carriages will be confined to a single part of the road, and a greater width will be leveled and smoothed. Whatever may be the nature of the road, a long scraper should, whenever the road is dry, and the effects of previous wet weather appear in the form of ruts, be drawn over the road to fill the depressions and remove all obstructions. This scraper is one of the most useful implements and labor saving machines, that has yet been invented, and no road district in the state should be without one.

In the third place, having secured a dry bed for the road, and leveled the surface, the cheapest mode of preserving it in fine condition for transportation, is to give it a coat of gravel some eight or ten inches in thickness. We venture to say that one-half the work laid out on the roads in most of our towns, would go farther towards making good roads if expended in placing gravel on them, than is now done by the whole. Graveling in some places, may be impracticable from the difficulty of procuring suitable materials, but such districts are rare, as observation will prove. It is a practice in most districts, to call out the work in the early part of summer, and expend all the labor at that time. In many districts it would be more to the profit of those who use the roads, if a part of this labor was reserved, and expended during the winter in transporting gravel to those points where the condition of the roads most require its presence, but to which distance may render it inconvenient to draw it in the summer. The work assessed in a road district should always be expended at the time, and in the manner, which will insure the most benefit to the roads. As the farmers, more than any other class, are interested in having good roads, they should direct their attention to their formation and preservation, and endeavor to understand and practice the principles necessary to this end. In the choice of implements and methods, old prejudices may be encountered, but a good road appeals so directly to some of the most influential principles of our natures, that when a part of a road is made good, there is little objection, usually, to a similar treatment of the remainder. Select then a good location for the road; provide by drains or ditches for freedom from all water in the road track; cover with clean gravel to the depth of ten or twelve inches, and there will be a promise of a road over which transportation will be easy, and which will need little annual repair.

DAIRYING ON THE WESTERN RESERVE.

The following account of the products of a dairy of twenty-five cows, is from a letter of Geo. Heslip, Esq. of Gustavus, Trumbull co., Ohio, to the editors of the Cultivator. He may well ask—"Can this be beat?" We do not recollect an instance, where the product from even a small number of cows, has averaged any thing like this. Few dairies produce over one-half as much, and 400 lbs. is considered a large product in the best districts of this state and New-England. Mr. Heslip says:

"As the Western Reserve is becoming somewhat noted for its cheese, being settled for the most part with New-England people, and as we say, 'Yorkers,' most of whom are engaged in the dairy business, I give you below the product in 1842, from twenty-five cows, owned and managed by Ephraim C. Selby, Esq. of this town, as follows:

13,715 lbs. Cheese, which is over 548 lbs. to a cow.
309 " Butter.
3,210 " Pork, from nine hogs.

This is exclusive of milk, butter and cheese, used by the family, of which no memorandum was kept. He raised four calves; dried off (to fat,) three cows, Sept. 1st, and ceased milking Nov. 1st. His cows are all of native breed, and received no other feed than good field pasture. Can this be beat?"

CUTTING MILDEWED WHEAT EARLY.

We make the following extract from a communication in the N. E. Farmer, from Q. C. Rich of Shoreham, Vt. The result is in perfect accordance with numerous instances which have been made known to us the past year, and which has placed the propriety of cutting mildewed or rusted wheat when first attacked, beyond a doubt. In this case, the theory founded on the chemical or natural action of the juices of the plant, agrees with practice; and the diseased action of the vessels, and the further deterioration of the sap, is promptly checked by cutting the grain.

"In the fall of '41, I sowed $1\frac{3}{4}$ bushels of wheat on 143 rods. During the early part of the spring it was backward and thin; but it improved rapidly after the spring rains. When heading out, it looked finely, promising a large crop; but the rust struck it, as it did the wheat generally throughout the country. My neighbors, many of them, advised me to let it stand till it was riper, as the heads and most of the straw, were quite green. To satisfy myself as to what others had said, I turned to the remarks of those who had communicated their practice through the Albany Cultivator, and found they were all in favor of cutting forthwith after its appearance. I followed their advice, and cut all, excepting what would make a single bundle; this I left, to see if there would be any difference in the grain. After this had stood till the straw was ripe, I rubbed a little of it out, and it was so badly shrunk, that taking this as a sample, I would have let any person have all the piece produced, for five bushels; and yet the yield was 21 bushels. Had I let it stand one week longer, I presume there would not have been five."

Original Papers from Contributors.

AGRICULTURAL PREMIUMS.

The New-York State Agricultural Society and the County Societies, have hitherto offered most of their premiums on Domestic Animals and Farm Implements. Generally from two-thirds to three-quarters of the whole amount offered, have been for these two objects. It cannot be denied however, that there are other departments of agriculture which are equally deserving attention. Greater advances have been made in the improvement of our breeds of animals, and in the construction of implements and machines, than in the general management and cultivation of land; and it has doubtless been the best policy to bring out to our Fairs what we already possess, in order to increase their attractions, and encourage general interest among farmers in the support of agricultural societies. At all events, I should be sorry to be even the last to find fault with what has been already done; but this will not prevent suggestions for future use.

It must be obvious that the great and permanent utility of these societies, depends not only on perfecting what we already possess, but in directing attention and inquiry into new channels, and towards new objects, especially if those objects are of the highest practical importance. While therefore a proper number of premiums such as have been already offered, are continued, it is proposed to offer another class for the best *experiments on cultivation,* independently of those for the largest crops. The following may be mentioned as instances:

1. Experiments on *manures*—the relative value of stable dung, muck, dead animal matter, night soil, lime, ashes, &c. when properly managed and applied; to be tested by their effects on different crops, and on various soils, as circumstances may permit. The best mode of applying ashes, leached and unleached; the quantity, time, mode of applying; the soils and crops most benefited. The same with lime and marl.

2. Experiments on the *quantity* of manure manufactured in comparison with the means—the quality to be tested by experiment. Many parts of our country abound in vast beds of peat and marl, and only need to be manufactured into manure to be worth millions. Premiums should be given to stimulate effort in this direction.

3. The best series of experiments on different modes of cultivating *corn*—as in hills, drills, double drills, &c. and for fodder; and the comparative cost of each; quantity of seed, different varieties and distances; kinds of manure, modes of applying, &c.

4. *Wheat*—experiments on different varieties—quantity and quality of manure for various soils—effects of lime, charcoal—early and late cutting—time of sowing, quantity of seed, &c.

Similar experiments might be instituted on potatoes, turneps, beets, carrots, barley, oats, peas, beans and other crops. Every thing in relation to these experiments should be submitted to the test of accurate weighing and measurement; and where practicable, analyses of the soils should be obtained.

Experiments might also be directed to the different modes of feeding and fattening animals, the quantity and quality of food, times of feeding, and the effects of shelter on the flesh, and food consumed—to be tested by weekly weighing. One premium or class of premiums might be given on swine, one on sheep, one on horses, one on cattle, &c.

Thousands of dollars have been paid out in premiums on improved breeds of animals, especially on Durham cattle and Berkshire swine; but not one that I am aware of, on experiments to test the superiority of those animals in feeding, fattening, and products, for the amount of food consumed. Conjecture is unsatisfactory to most, and hence they adhere to their old and inferior breeds. The amount of milk and butter yielded by Durham and other cows, from a given quantity of food, is especially needed, and it is hoped that liberal premiums may be given for this purpose.

Convenient machines for weighing, and facilities for measuring, would of course be of the first importance.

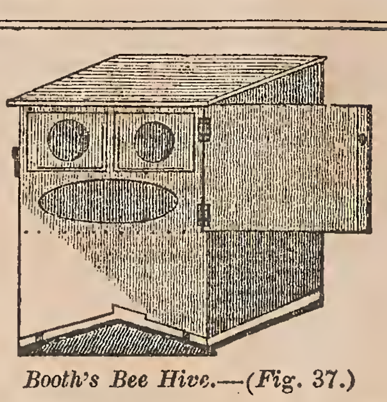
Such proof of the correctness of the reports of these experiments may be required, as is thought expedient.

If agricultural societies should adopt this course, and offer premiums large enough to enlist intelligent cultivators throughout the state, the reports for these premiums alone, would make a most interesting volume of transactions.

J. J. Thomas.

THE PERFECT BEE HIVE.—(Fig. 37.)

Messrs. Gaylord & Tucker—Before giving a description of the above hive, (which I denominate the Perfect Hive,) I wish simply to say, that a hive to be useful, should be cheap and easy of construction, simple in its management, avoiding all complexity. The form of this hive is with right angles, similar to the old fashioned box hive, and divided into compartments, an upper and lower, of unequal dimensions. The lower is the hive proper, in which the bees rear their young, and where the winter store of honey, bee bread, &c. is deposited. The upper receives a set of drawers for storing the surplus honey.


Booth's Bee Hive.—(Fig. 37.)

The inquiry of bee cultivators has been, and is, how shall we protect bees from the night moth and worm. *Care* and *attention* will always be requisite, but I have full confidence that we may afford ample protection by using hives, in the construction of which all seams, joints, or cracks, which offer a secure retreat to the moth are dispensed with; for it is well known to every apiarian who has attended to the subject, that the moth deposits its eggs in those seams and those only which will give security to the young grubs. She never leaves them in such openings of the hive as are sufficiently large to admit the passage of the bees. But if bee keepers (without reflection,) will locate their swarms in any and every thing in the shape of a hive, (and none the better for being patented,) they may expect a continuance of the evil. For the purpose of discharging from the hive all filth, dead bees, &c., the form of the bottom is a double plane, and *under,* not *in* the hive; the body is elevated about one-third of an inch above it, by means of hinges of a new construction; the bees find free egress and ingress around the base of the hive; the air has a free circulation, preserving their health, and the moth finding no place congenial to her wishes, seeks other places than the hive in which to lay her eggs, and thus worms being excluded, the swarm prospers.

A serious objection to all hives which have come under my observation, has been want of ventilation in the chamber. Bees, as well as their owner, require pure air: and none need be told that air ascending into drawers from the interior of the hive, in consequence of its being rarified, and there remaining impure for want of ventilation, is ill adapted to induce bees to work or even to remain in such drawers. I think this may be one great cause of bees failing to store honey to any considerable amount in the drawers of modern constructed hives. In the above hive, not only the body, but the drawers receive free ventilation, and in storing honey the labor and travel of the bees is greatly lessened, by their being admitted by the ventilators directly into the drawers. The hive has been in use in many apiaries in Massachusetts, the past season, with entire satisfaction. It thus far promises to be a complete protection from the moth and worm.

Edwin Booth.

Springfield, Mass. March 29, 1843.

FARMER'S CLUBS.

Messrs. Gaylord & Tucker—There is no one thing of more importance to agricultural improvement than a concentration of facts, which are constantly developed by practical farmers, and thence a wide dissemination thereof.

There is no farmer who cannot learn something from his neighbors, and who cannot in turn communicate valuable information; yet men spend their lives near each other, and perhaps never converse upon the various subjects of their profession. Neighborhood or town meetings held by farmers at stated periods, wherein are discussed the various subjects relating to farming, would be of the highest importance to every farmer, not only in the town, but throughout the country, inasmuch as their discussions would bring out the result of each man's experience, and thus a mass of facts would be collected for the benefit of the whole community. The substance of each man's discourse should be published in some county paper or in some one of the agricultural papers.

A Club has lately been formed in this town, the first I believe in the state. I send you our rules, and some of the proceedings of the first meeting, and I hope others will follow our example until there is not a town in the state which has not its Farmer's Club.

T. C. Peters.

DARIEN FARMER'S CLUB.—Rules.

This Club is formed for mutual improvement in Agriculture, and is auxiliary to the Genesee County Agricultural Society.

The officers of the Society shall consist of a President, Recording and Reporting Secretary. The President may be elected at each meeting; the Secretaries as often as a vacancy occurs.

It shall be the duty of the President to preside over the deliberations of the Club. It shall be the duty of the Recording Secretary, to keep a record of the proceedings of the Club in a book to be provided for that purpose, and to assist the Reporting Secretary in his duties. It shall be the duty of the Reporting Secretary to report the substance of the statements of members upon the subject under discussion, and prepare them for publication.

It shall be the duty of each member to confine his remarks strictly to the subject under consideration, so that the reporters may not be confused; and, whenever called upon by the President, to write out the substance of his remarks, and deposit the paper with the Secretary.

The subject of discussion shall be named at the last meeting for the next.

The President may call upon any member to commence the discussion, and the last speaker may name the next, or in default, any person may volunteer, or the President call upon another member.

Any person may become a member by signing the Club roll.

At a meeting of Farmers held in the School House in the village of Darien, March 11, 1843, Mr. T. C. Peters in the chair, the foregoing rules were read and unanimously adopted.

The chairman then announced that the "Cultivation of Potatoes," was the subject which had been fixed upon for this evening's discussion.

Mr. E. Losee—Potatoes have not been a leading crop with me. I consider them profitable, especially when well manured. I have not been in the habit of manuring much. My soil is a gravely slaty loam. I have raised the best when planted at the bottom of the furrow. Have grown them upon heavy soil. On such soils should advise shallow planting. Think I can raise as good upon light soil as upon heavy.

Mr. J. W. Hyde—The plan I have followed for the last three years, and prefer to all others for raising potatoes, is to take a piece of sward which has not been fed, and when the grass is well up, say about the 1st of June; upon this I put my long manure in such quantity as to fill every fourth furrow. The fourth furrow is filled with the manure, and the potatoes dropped about eight inches apart; the furrow slice is then turned over. The after cultivation is merely to keep the ground clean, and thinks that the crop is best without plow or cultivator, provided the grass and weeds are kept down. Prefers large potatoes for seed; plants eyes on account of economy of seed. Harvests with plow and harrow. Usual crop about 400 bushels per acre. Soil, gravely slaty loam; subsoil same; is a dry land. Prefers the Irish grey to any other kind. Has never applied leached ashes, but has no doubt as to the advantage, as he noticed one year where a quantity of chip dung, into which the leaches of the house had been thrown, and which had been spread upon the potatoe ground, the potatoes were larger and fairer than on either side. Is satisfied that one cause of small potatoes, is too much seed in the hill. His father, a few years since, in planting a piece, cut off the seed end, threw it to the hogs; the crop was very uniform in size, and a good yield.

Mr. D. Carter—Prefers sward plowed in the fall. In the spring he gets out his long manure, plows it in, and harrows. Deep plowing essential, furrows cut very shallow, plants in hills three feet apart each way, about 1st June for late; as early as possible for table. Plows and hoes; generally plows each way; makes rather a broad flat hill. Crop varies from 400 to 500 bushels per acre. For stock, prefers the Irish grey; for the the table, the Mashonic. Has a very valuable spring or summer potatoe. Has raised the Merinos, but thinks from his experience in feeding hogs, that one bushel of Irish greys are worth at least one and a half of Merinos. Has tried leached ashes some, and considers them very beneficial. Selects the largest for seed.

After some further discussion, it was resolved that the same subject be continued at the next meeting, and the Club adjourned to the 18th inst.

LEAF HAY—CORN AND CLOVER—COAL.

Editors of the Cultivator—In answer to your inquiry as to the result of my use of leaf hay as fodder, I would state, that in the latter part of the winter of 1841-2, I fed the leaf hay mentioned, to both cows and horses, and the result was not as flattering as I anticipated; for the horses partook of them sparingly, and the cows more so. The leaves were of the different kinds of oak, which are not relished by brutes when green. If they had been of hickory or chestnut, I doubt not they would have been eaten freely. In a heavy forest, with a light rake, leaves can be collected expeditiously; but perhaps not more than one fall in three is suitable for securing leaves in hay condition. The four tons of leaves mentioned, made me a nice quantity of manure; perhaps in value equal to twice this quantity of ordinary leaves.

If I dare advise P. F. Wislar, Esq. I would say that he should abandon his intention of sowing corn and clover together, for undoubtedly the corn will smother the clover. Or if he shall sow the corn so thin as to obviate this objection, then the weeds will destroy the clover.

Please accept my thanks, gentlemen, for your admonition touching my last communication; nevertheless, I must insist that where one object in the use of coal is to create porosity, it should not be made fine.

Instead of burning only 1,500 bushels of coal, I have, during the winter, burnt at least 4,000, which, together with the burnt covering of earth, ashes and soot, make about 9,000 bushels of manure, which I have principally used in the compound on clay grounds, at the rate of about 600 bushels the acre. I have thought it most advisable to spread the most of my coal of this year, directly on the land, that I may see its direct effect. I shall try it on corn, wheat, cabbage, meadow and grazing lands, and report the result. If the result should justify the outlay, I intend next winter to burn about 20,000 bushels—that is of coal, earth and all, which will suffice for 35 or 40 acres. As to the time, I never miss it, and the wood is a cumbrance. It seems that coal is the stuff for clay, and ashes for sandy grounds. Now, although I have the clay and sand and wood for both coal and ashes, yet being a tobacco grower, I cannot work very well at those matters. I keep one ox cart about five months in the year, moving manure, yet shall not be able to get out all my manure this year. About 3 months of this time is winter, when only about one-third work can be done.

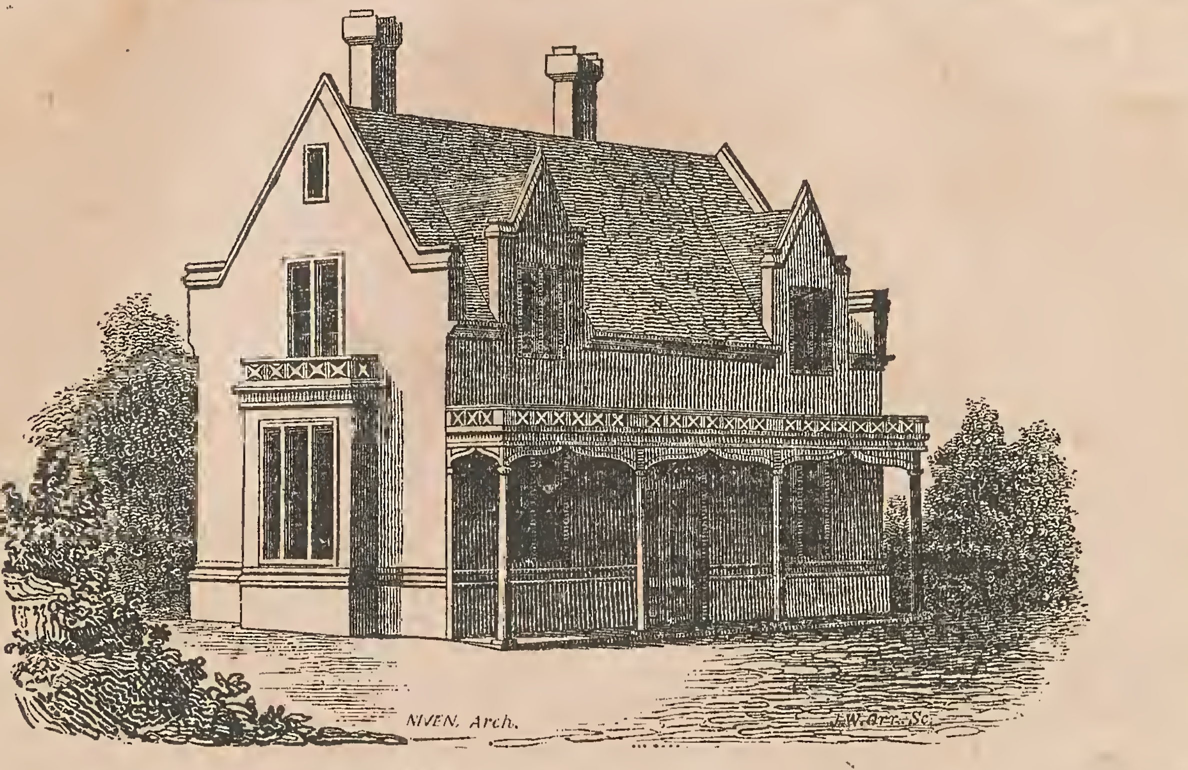
But I see I am flying off the helve: so close, by stating that about 10 o'clock this morning, it began to snow from eastward; about 12, the snow came from the west, and it is now, at 6 o'clock, cold and snowing and blowing rapidly, and likely to be the deepest fall we have had this winter.

Za. Drummond.

Amherst co, Va., March 16, 1843.

A FARM HOUSE.

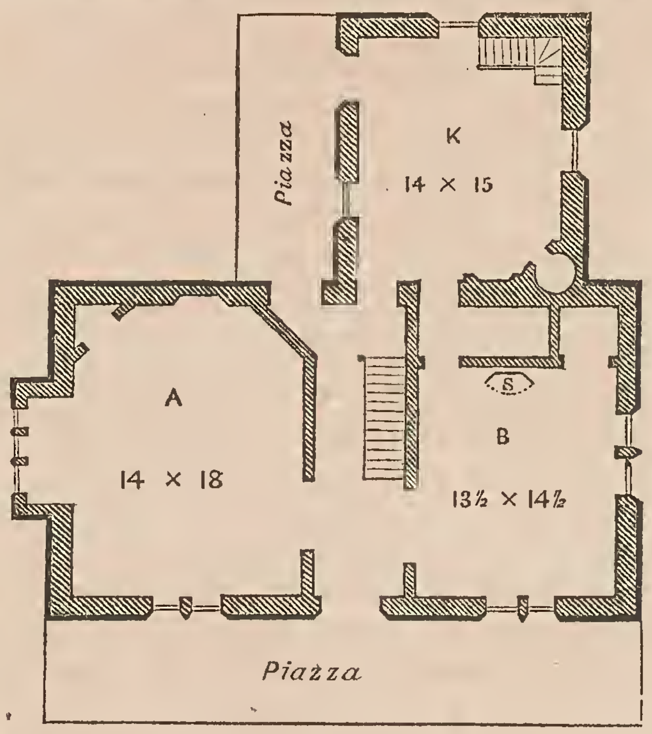
MESSRS. EDITORS—With this I send you a design for a farm house, or cottage, in what is known as the Tudor style of architecture, with some modifications indeed, which I think are required to adapt it to our climate. The Tudor style is essentially English, and in its severest features is no doubt well adapted to that climate; but instead of the porch, which is always found in connexion with a building of this description in England, I have attempted to Americanize it by throwing a veranda or piazza in front, as well as one in the rear; although I have endeavored to give them an appearance which should harmonize with the whole. How far I have succeeded, your readers must judge. The style itself, if in a favorable situation, is extremely picturesque and beautiful, calculated to convey to the mind the idea of snugness and comfort.


NIVEN, Arch.
J.W.Orr.Sc.

A FARM HOUSE.—(Fig. 38.)

This plan is of a building of humble pretensions. It furnishes (see fig. 39,) a parlor, (A.) a dining room or sitting room, (B.) and a kitchen, (K.) on the main floor, and four sleeping apartments each about 9 by 10 feet, on the chamber floor, besides 2 servant's sleeping apartments over the kitchen, each about 7½ feet by 14 feet, with a cellar under the whole. The sitting room I would heat by a stove, (S.) carrying the pipe to a drum (as it is called,) in the rear chamber above, and thence into the chimney, by which means one sleeping apartment is warm from the heat below. The cost of this building, of brick, stuccoed in imitation of stone, or laid up plain, would be about $1,600, if in a favorable location for getting the materials. A house of this style should never be built of wood.

Newburgh, March 10, 1843. T. M. NIVEN, *Architect.*



Ground Plan.—(Fig. 39.)

LATE PLOWING.

MESSRS. GAYLORD & TUCKER—Having on former occasions given my successful experiments with clover, tobacco, and wheat, in the three field plan, and having since failed, it may be but justice, and therefore proper, that I sould tell my brother farmers how I have failed in cropping. My course has been to haul out all the manure I had upon the lot which had been in clover two years, once and sometimes twice plastered, half bushel to the acre. I have always put off plowing as long as I could venture, late in April, that I might benefit the lot itself with additional green manures, and spare my young clover by grazing this. The consequence has been, in grasping after so much, I failed to get my ground in proper order, and the sequel is, I have raised but two good crops out of six. So I have clearly learned that the chance of success of late plowing, is as two to six. My thoughts now are turned upon the importance of early plowing and a thorough preparation of turf land for corn or tobacco, especially when well covered with old clover. I have been, this, the third week in January, the thermometer ranging from 50° to 65°, plowing a few lands of clover lay, to compare the effect of January, March and April plowing. In weather not oppressive, I love to direct a good plow, and walk behind a span of well broken and well fed horses; it is no mean occupation; in my humble estimation, it is pleasant and healthy, the exercise promoting digestion and circulation, giving the mind ample scope for its full and free operations, yet how ignoble is the employment viewed by many whose effeminate vocations it throws in the shade. While being engaged on this occasion, my faith was exercised as my meditations ran thus:—I shall lose the use of the lot to graze, as well as a little green clover to turn under; but I shall put under a vast quantity of unrotted rubbage, turn up and expose not a few of the hatching eggs, and I do hope among them the eggs of the cut worm, our greatest enemy to corn and tobacco, and should the pulverising effect of the frost he found advantageous, I shall be convinced the least risk is in too soon rather than too late plowing. Respectfully yours, D. G. WEEMS.

Tracey's Landing, Anne Arundel co. Md., 1843.

NOTE.—Commentator, who in his reviews, (and in many instances witty and judicious criticisms,) has guessed me to be a doctor, from some medical quotations in their peculiar technical terms, and rather unintelligible withal. Mr. C. may be desirous of knowing with what precision he made his guessing shot. I will say to him, I bleed; and if a cart and four being driven to my door with a patient for venesection, be a proof of skill, he will admit I should know at least a vein from an artery: and when I inform him I was this morning consulted upon a case of impeded labor, he may be satisfied he is a good southern guesser; but not so, sir: I have no diploma, neither Thompsonian steamer, and therefore not entitled to his appellation of M. D. to the end of my name, and hence not a part of my signature, as that of our cotton correspondent of Alabama. I acknowledge my quotations savored a pretence to reading, but it was English, and I thought it was in place. I agree with Commentator, that farmers generally are "not high larnt," but to this general rule, there is one exception at least, and that must be the reviewer of words of the old domains, whose "half century's experience" I revere and venerate. I have a little book, and have read in substance as follows, about the beam and the mote in the eye of the preacher, whose fears were, while teaching and instructing others in the right road, he might be lost himself; and again, where he who speaks in an unknown tongue talks foolishness unless it be interpreted. Quere, father Commentator, wherefore and wherefrom those strange sounds for the "unlarnt farmer," "Credat judæus," "Occupet extremum scabies," "Ipse dixit?" Did they ooze unobserved from your finger ends, and are they the names of some new grasses, grains, implements, or animals? "Esprit du corps," exotic, I guess monsieur, imported from Paris. Pentagonal, hexagonal, I find is really English. I would ask the reader, does not this Latin, French, and redundant English, savor a touch of the sublime, a tincture of pedantry, and a little of the verbosity. I would now repeat to father Commentator, his own advice somewhat, that in his future reviews for the Cultivator, when he cannot possibly refrain from using such outlandish expressions, he will for the edification of the farmers who are "not high larnt," accompany all such dead phrases with a translation or a duplication, as he did in the two English words. D. G. W.

WESTERN FARMING.

To my friend of Richmond Co. N. Y.—Your letter in the March No. of the Cultivator, has been near three weeks on hand. I would have made more haste to answer it, but since it was written, you must have seen my article in the February No., in which I have anticipated some of your inquiries. And I hope you have also seen the American Agriculturist, published in New-York city, in which you will find some more information upon the subject of farming in the west.

I am now writing upon the 21st of March; a clear sunny day, and the thermometer in the shade, 25° below the freezing point; the latitude 41° 30′. [By the by, there is an error of 9° in the statement of your latitude.*] The ground covered with snow, and I should now be gliding over it after a load of pine timber near the beach of the lake, only that I was taken slightly unwell after I had got my horses harnessed for a start—to that you owe my present occupation. This is a very unusual hard winter, and the people are learning a lesson of dear bought experience. For notwithstanding the fact that hay of a most excellent quality, equal to timothy, may be made in any desired quantity, as fast as a man can cut it upon smooth clean ground, at the rate of two or three tons to the acre, they did not provide enough for this very severe winter, and the cattle are actually starving to death at this time. Even the ashes of ten thousand tons of burnt straw won't save them; neither will the cornstalks that have been safely preserved for spring feed, any more than keep them alive.

"What, do you say that cornstalks are not good rich feed?"

"Oh no! I said no such thing. I said they had been carefully preserved, and would have told you where, but you interrupted me."

"Pray then, tell us how you preserve cornstalks in the west."

"Yes, I will—that is, how thousands of acres are preserved—by letting the corn stand just where it grew. And such fields as are not gathered by the hogs in the process of fatting, are gathered as wanted through the winter, and thus are the stalks *preserved* for the cattle in the spring. 'Rich feed,' ain't it?"

And now if I tell you how corn is planted sometimes, your skeptical neighbor can reduce his figures.

And firstly, of the first crop on the prairie. The sod is very tough, and is generally broken from 3 to 6 inches deep, and 16 to 24 wide, turned over flat by a plow drawn by 4 or 5 yoke of oxen, 1½ to 2 acres a day. In every second or third furrow the corn is dropped near the shoulder, and the next slice turned over upon it. This produces a middling crop with no after culture whatever. Again, in old land, the ground being furrowed out for the rows sometimes one and sometimes both ways, the seed dropped in the furrow is covered by passing along another light plow, and as soon as planting is done, then commences the after culture, or rather, I should say, the plowing of the ground, and which culture is almost entirely completed with the plow. No manuring, no hoeing, or but very slight, no harvesting in many cases, that being attended to by the hogs, no saving of stalks for fodder, and as the land is as mellow as your garden, and as free from all obstruction to the plow, is it to be wondered at even by your unbelieving neighbor, that corn can be raised by the hundred of acres, upon such a system, upon such land, without "a regiment of men and boys."

And in regard to wheat, it does not require a regiment of men or teams, to put in 800 acres of wheat, upon land as mellow as an ash heap, where the plowed lands are a mile or more long without turning; and as the seed time runs through a space of near two months, so the harvest runs about half that length of time; and as to when it is housed, I would answer that during the last fall, thousands of acres of wheat were thrashed by a kind of machine that is fitted upon wheels and drawn about the field by 4 or 6 horses, tended by three men, one of whom takes the sheaves from the ground or the shooks, and pitches them up to the feeder while passing along, and the straw and a great portion of the chaff is blown upon the ground, while the clean wheat is deposited in a reservoir, which when full, is expeditiously emptied upon a sheet of canvass, and from thence is taken by a wagon to the barn; so that the barns instead of having to hold the sheaves, are only required to store the grain. And thousands in this new country, who farm on a large scale, have not even a barn for that purpose, but depend upon a rail pen with the cracks corked with straw, or some other equally primitive mode of storage.

And those who do not thresh their wheat immediately after cutting, stack it in the field or some convenient spot for threshing, where, if it is well put up, it will keep far better than in any barn. And the way the straw is disposed of, I have hinted at in the first part of this letter; and many contend that it is the best way, as it is not wanted for manure, and cannot be consumed by cattle in ordinary seasons, and certainly not as quick as by fire.

That this is the best system of farming, or that all these things are universally practiced in the west, I shall not assert, but that they are to a great extent is true.

It would seem to you wonderful to see so much good soil lying waste—and wicked to see so much good soil wickedly cultivated—extravagant to see so much grain grown for no other apparent purpose but for the pleasure of seeing it grow, without deriving any profit from the growth.

The question is sometimes asked, if land is so cheap and good and easy to cultivate, why don't the western farmers all get rich?

I have already answered this, but I will repeat; it is in consequence of the extreme fertility of the soil. I am not going to undertake to tell why it is so, but so it is, that when the whole land is so cheap, so easily cultivated, and so productive with so little labor, mankind will grow indolent, and do not accumulate wealth as fast as you do who have to dig and delve among the "rocks and stones, bushes and briars, and stumps," and then manure your land at an expense for one year, that equals the value of the rent of an acre of land here, equally fertile as yours after receiving the manure, for more than seventeen years.

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* This was a typographical error. It should have read "Lat. 40°, 30′, N."—EDS.

And although we can raise corn and oats here for six cents a bushel, better than you can at 56 cents, we cannot compete with you on account of transportation. But in articles of more value, we do, and might to a much greater extent, if we cultivated our soil as you do yours. It is an incontrovertible fact, that you "expend more labor with less profit," than we do. And I believe it is an equal fact, that you make more profit out of your labor; for you are compelled to be more industrious. But again, you are compelled to spend a greater amount of your profits to provide for your artificial wants, in the artificial state of society in which you live. For my own part, I am willing to plead guilty to a love of indolence, and for that and some other reasons, I love this country. But I don't want any more to come here solely because they are indolent; there is enough of us of that kind now. But if you, or any of your neighbors, who till your little farms, and till them well, would like to till more and till better, but cannot where you are, I pray you come here.

But one thing I beg of you: notwithstanding I would like to see you practice a little different from what I have described, try to forget before you come here, that you ever spent 18 days works, besides the two teams, planting seven acres of corn, or in the whole work of raising the crop, 87½ days; lest you should happen to mention it, as it would certainly injure your character as a man of truth.

Let me see how it would answer here to spend 87½ days upon 7 acres of corn.

Wages, 50 cents a day, or about an average of $10 per month, or including board, I suppose 50 cents a day is a fair price, so that 87½ day's work at 50 cents a day, is............	$43 75
The crop of 7 acres of corn, at a fair average, 50 bushels to the acre, 350 bushels, at 12½ cents a bushel,..........................	$43 75

A nicely balanced account, saying nothing about the team work and husking.

And again, "seventeen dollars an acre for manuring." Don't tell that to us, while moving our barn to a "clean spot," to get away from the yard where we lost the old red cow, mired in the dung.

Let me see what would $17 do here. Why, as I said before, it would pay the rent on 17 acres of land one year, or one acre 17 years, well fenced and under what we call good tillage. Or it would purchase upwards of 13½ acres of soil, more fertile than yours after being thus manured. Or it would purchase one acre, and more than half build a comfortable log cabin upon it.

Now you see it is as difficult for us to understand your operations in farming, as it is for you to understand ours.

But if you, (by you, I mean eastern farmers generally,) and particularly your book farming hating neighbor, will take a journey through the west, there will be no more doubts expressed as to the magnitude of western farming. But which produces the most, (not wealth, but happiness,) I am unable to answer.

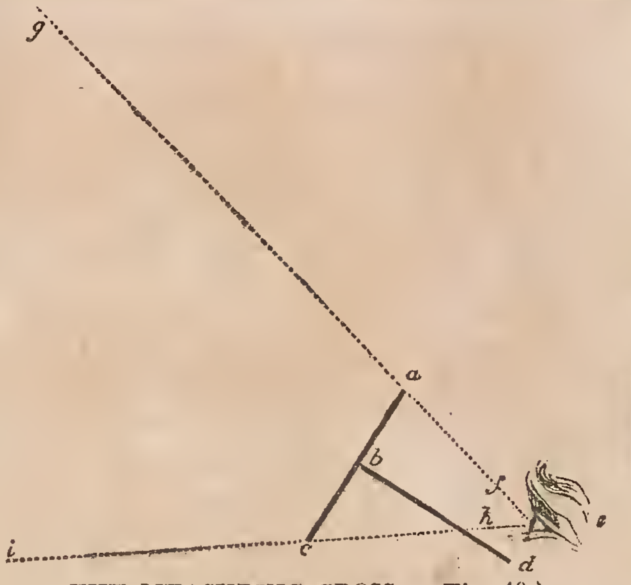
And now, sir, I hope what I have hastily thrown together, may give you some pleasure and satisfaction, for it is because I am induced to believe from a great number of similar complimentary notices to yours, that I have been able to please if not instruct my readers, that I have continued to make myself acquainted with you, through the agency of our common friend the Cultivator, and which I would most particularly recommend my new acquaintance, to whom you have introduced me, to subscribe for and read, and if he learns nothing more, I hope he will become so well acquainted with me, as to be able to rely upon what I may assure him is the truth. And not only this particular individual, but some thousands of other New-York farmers, are in duty bound to subscribe for this paper, and at this time, because it is a New-York farmer's paper, particularly devoted to their interest, and because the support from other states has materially fallen off this year, through sundry causes, and the New-York farmers alone ought to have sufficient pride to give the paper patronage enough to enable the publishers to maintain its present high standing.

And now my friend having written you a,long letter, allow me to find one fault with yours:—it is anonymous—this is wrong; you should have given your name; you have written nothing but what you might be proud to acknowledge; besides, you have the advantage of me; to you I am almost personally known; and if I knew your name, and should by any chance be placed in a situation where I could knock at your door and receive, (as you may at mine,) the welcome "walk in," I have no doubt but I soon should become actually known. Thus our acquaintance and friendship is extended, whereby the agricultural interest is cemented together. This is one of the great benefits of agricultural papers; think of it in future. And now I will subscribe myself your friend,

SOLON ROBINSON.

Lake C. H., Ind., March 24, 1843.

GREAT YIELD OF COTTON.—J. E. Caldwell, Esq. of Fairfield District, S. C. raised last year, on one acre and an eighth of land, 3515 lbs. of seed cotton.



THE MEASURING CROSS.—(Fig. 40.)

MESSRS. EDITORS—When I was a little boy, I heard a very learned and scientific gentleman, a native of Germany, describe to my father, an easy method of ascertaining the exact height of a tree, monument, or any other perpendicular object, by means of what I have called at the head of this article, the *Measuring Cross.* As a knowledge of this may add to the farmer's stock of useful information, I communicate it for his special benefit.

In this diagram, *a. c.* and *b. d.* represent the cross to be used; *a. e.* and *b. d.* being of equal length, each precisely *twelve inches. b. d.* must be inserted in the center of *a. e.* at *b.* Then go towards the object you design measuring, placing the end of the cross *d.* on your chin, or upper lip, or any other part of the face on a level with the eye, until the *top* of the object at *g*, and the *end* of the transverse piece of the cross at *a*, form the right line *g. a. f.* with the eye at *e.*; and the *bottom* or *foot* of the object at *i.*, and the lower end of the transverse piece at *c.*, form the right line *i. c. h.* with the eye as before. Then *from the spot where you stand, to the base of the object, is its exact height.*

In this way, any person, though ignorant of the principles of trigonometry, may measure correctly a tree, for example, the height of which he is desirous of knowing before he falls it, so that he may be assured it will afford him a piece of timber of the requisite length for some particular purpose. Sometimes a farmer is under the necessity of falling a tree towards a fence some distance off; he is not certain, however, from merely looking at the tree, whether it will reach the fence or not; he has no quadrant or other angular instrument with which to take the angle of elevation; or if he even have, something else may be necessary and not at hand, or if at hand, not understood before the calculation can be made; moreover, it may be a cloudy day, or the tree may stand in the edge of the woods, and hence no shadow to afford data for his figures. Now what is he to do without the measuring cross? He will guess at the matter, and in all probability be mistaken; for as we are more accustomed to measure things of a *horizontal* position, the eye, being more experienced in such cases, is a better guide than in ascertaining the height of *perpendicular* objects. If he guess the tree *too low*, he will let his fence remain, and have it crushed to the ground; if he guess it *too high*, he will go to the trouble of taking down his fence, and putting it up again for nothing. But by means of this cross, he can tell at once whether it be necessary to remove the fence or not. Respectfully, J. H. YOUNG.

Boonsboro', Md., March 10, 1843.

CULTURE OF RICE.

IN answer to the call for information on the culture of rice, in our March No., ALFRED HUGER, Esq., P. M., Charleston, S. C., has favored us with a copy of a neat pamphlet of 80 pages, entitled "A Day on Cooper River, by John B. Irving, M. D." "In this," says Mr. H., "you will find Mr. Myrick's mode of planting rice, the best and the most successful that we on Cooper river have ever adopted." Annexed is the description of Mr. Irving of the mode pursued by Mr. Myrick in the cultivation of rice on Cooper river:

The lands were dug up in winter every second or third year, and turned up about five or six inches. He never turned in the stubble on river lands, but burned or hoed it off. When the fields were turned up, the ditches were shoveled out to the original depth, all the mud taken from them being thrown in the center of the bed, so as to make the bed more or less convex, and to allow the water to run off with greater facility. He never allowed the mud to remain at the edge of the ditches. He considered such slovenly work more injurious to a field than having no ditches at all. The fields were then flowed deeply, and kept so until ten days or a fortnight before planting, when it was run off and kept dry. A day or two before he commenced trenching, he chopped and leveled the field; then he selected two or three of his most intelligent fellows, whom he termed "guage men." These divided the fields with the greatest accuracy into beds of five feet, by drawing trenches at that distance from each other throughout the field. On the ensuing day, the rest of the men followed, and filled up these beds, by drawing rows fifteen inches from center to center.

He commenced planting on or about the 25th of March. His trenches, as I have said, fifteen inches from center to center, three inches wide, and as shallow as possible, merely giving earth enough to hide the rice, putting two bushels of seed rice to the acre. As soon as he finished planting a square, he flowed, and kept it flowed four days, taking off any trash that might collect. On the water being drawn off, the land was kept dry until the rice had attained its *fourth leaf;* it was then hoed from three to four inches deep, so as to turn over a good sod. Water was then again let on from fifteen to twenty-one days, according to the following circumstances.

At the end of fourteen or fifteen days, after the long-water (so called) was on, he always carefully *examined the roots of the rice.* If he found that the plant continued to put out new roots, and to form tillers, he continued the water on; but as soon as he discovered that the roots were getting hard, and ceased to grow, he run the water off. When he commenced drawing this flow off, (which was very gradually done,) as the land became exposed, he would, to use his own expression, "*follow the water,*" and pull out all the grass in the trenches. As soon as the ground became perfectly dry, he gave the land another hoeing, about three or four inches deep, as before, to mellow the land, and allow the air to get into it, so as to expand the roots, and enable them properly to perform their functions. About a week after this hoeing, if upon examination of the roots, they were found hard and dry from hot weather, without occasional showers, he damped the field by letting in a tide or two, and then running it off.

He sometimes gave the land a second *light hoeing*, after the long flow, but this depended altogether upon the state of the plant, the field and the weather. If the second hoeing could not be done before the forming of the *second joint*, indicated by the stock putting out a new set of roots above the old, it was omitted, and the water put on. At the forming of the *second joint*, water was invariably put on, and kept deep on the rice. This period he deemed the *crisis* of a crop of rice. A very admirable and lucid writer in the Southern Agriculturist, for October, 1832, page 531, whom Mr. Myrick has often been heard to pronounce among the most skillful and judicious planters he knew of, in treating of this important stage in a rice crop, uses the following expressive language, which I must take the liberty of borrowing:

"This is decidedly," he says, "the most important crisis in making a crop of rice—nay, to obtain a full crop, it is a *sine qua non* to have your field *perfectly clean,* and a full command of fresh water at this time, inasmuch as the ear is now about to be formed, and will be either long or short, have many or few grains upon it, in proportion to the healthy or unhealthy state of the plant; and the quantum of grain can no more be increased by subsequent attention or good culture, than the sex in the animal creation can be changed after the formation of the fœtus."

Mr. Myrick sometimes drew the water off, when the rice was "*tight in belly,*" but this was not his usual habit. He only did it to give the rice air, as well as to clean it of grass, when he found the ear not coming fully and regularly out, or as it may be more intelligibly expressed, perhaps, when a whole field would not otherwise ear out and blossom at the same time.

From the time the rice was in ear till it was fit to cut, he kept the water on, preserving the regular depth, but *freshening* it every two or three days, by letting some of the old water out, and taking in fresh.

As soon as the grain was hard, and full ripe within a few grains of the bottom of the ear, the water was let off for four or five days, when the rice was cut and harvested.

It is proper to state that Mr. Myrick was very particular as to his trunks and drains, and banks. In the construction of the latter, he considered a mixture of highland earth with mud, indispensable to the permanent duration of a river bank. He thought the light vegetable matter composing such land too perishable stuff for a bank, and that if used by itself, without the admixture of earth, would not only contract and separate, but settle also very considerably. Mr. Myrick, therefore, always added highland earth, not in layers, or indiscriminately mixed, but he *put it in the middle of a bank*, vertically from the foundation to the top, and the two sides plastered or sloped with mud. He did this not only to prevent cracking, but to guard against the perforations of crawfish, and to save the banks from being washed by spring tides, and when the fields were flowed. The base of his banks were never less than three times as great as the height.

Mr. Myrick's lands were divided, as nearly as he could, into fields of twenty acres, having reference, however, to the location of the land. Around each square, he placed a margin ditch, six feet wide at the top, and three feet at bottom, and five feet deep. The body of the field he divided by drains, two feet wide and three deep, one hundred feet apart. If the land was low, and drained badly from any other cause, he placed these drains or ditches seventy-five feet apart instead of one hundred. These ditches all emptied into the marginal ditches, six feet wide and five feet deep. The margin ditches were placed at a distance from the cross banks, twenty feet, and from the river banks, forty feet. If the field was lengthy, he put a center ditch, four or five feet wide, crossing the small ditches, which greatly facilitated their draining.

Mr. Myrick's task in digging land, was one-quarter to the hand, plantation measure. In chopping the land, each hand was expected to do half an acre, but if the digging had been deep, twenty compasses alone were required, thus striking off ten compasses from the half acre. In trenching, each man was expected to do three-quarters of an acre, except the guage men, who, from the accuracy required of them, did only half an acre; or, in other words, they were each required to trench a number of rows equal to one hundred and twenty rows, of one hundred and fifty feet in length. Two acres was the task for a prime sower, and three-quarters of an acre for those who covered the rice.

Mr. Myrick put his trunks down to low water mark, and as nearly opposite the centre of the field as possible. One trunk, twenty-eight feet long, three feet and a half wide, and eighteen or twenty inches deep in the clear to every field of twenty acres, he deemed sufficient.

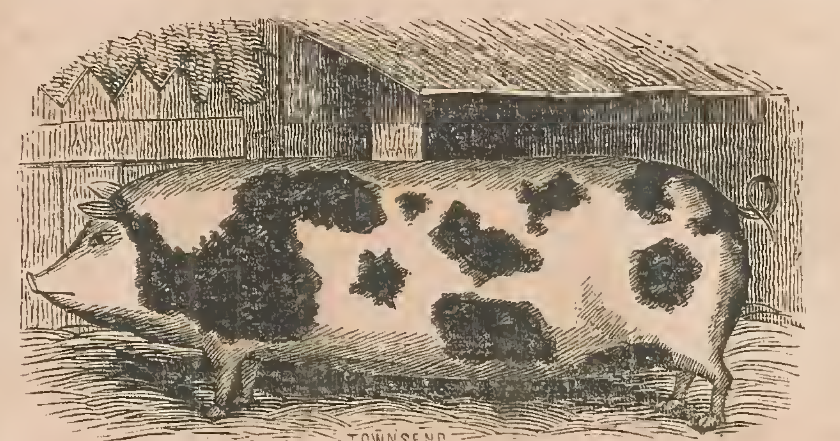
LETTER FROM MISSISSIPPI.

Editors of the Cultivator—During last year, some kind frined, I know not who, (but if this ever reaches his eye, I beg him to accept my heart-felt gratitude,) sent me the seven first numbers of the 9th vol. of your most valuable paper. I need not assure you that as a planter, I read it with the greatest pleasure and profit; indeed, so much was I pleased, that I determined to become a subscriber this year.

Although the "Cultivator" is published in a state where perhaps a cotton plant never grew, yet do we of the south, where cotton is the great, I may say the only staple, derive the greatest benefit from its perusal. I would, indeed, its circulation were extended over the whole south; it is just the thing we want—a newspaper that advocates economy in every department, the producing every thing at home, and which, by the way, tells so many ways how these can be done. With us, heretofore, it has been too much the case that every thing has been sacrificed to increase the production of cotton. When this article yielded from $50 to $80 per bale of 400 lbs., the ambition of all was, who could produce the greatest number of bales—quality never (or scarcely ever) entered our heads; and to be candid, Messrs. Editors, it was then worth while striving, if the like effect could have continued. But now, alas! what a change has come over us! The crisis has come; the storm which was so long gathering has burst upon our devoted heads, and we are left, I had almost said, the spared monuments of former folly and recklessness. But to drop the metaphor, and deal only in the real: such has been the anxiety and determination, heretofore, to produce cotton, that I know I hazard nothing in saying, it has been made the sole desideratum; all else has been made to bend and yield to the accomplishment of this one end. All the minutia of farming has been passed over informally, or totally neglected; the improvement of our farms, the proper attention to our stock of every kind, (in order to have any,) has not only been considered of secondary importance, but almost as a matter beneath the notice of a cotton planter. Hence, since sad reverses have come, we have not only every thing to *do*, but nearly every thing most important to *learn*. The delusive fancy of many, that cotton would always or for many years maintain itself at 12½ or 15 cents per pound, I doubt not has been both directly and indirectly one of the chief, if not the very greatest cause of our present unparalleled distress and embarrassment. What more than this could have stimulated speculation until it amounted to a mania, introducing luxury, extravagance, and all the vices that follow in their train, causing us, in total disregard of sound policy, to produce every thing for market, nothing for home consumption? Can any people be considered independent, who cannot or *do not* live within themselves, at least as to all the substantials of life? If we sell all we raise, and buy from our neighbors the necessaries of life, are we an independent people? But the question is an absurdity. Such, however, Messrs. Editors, has been our course in this country. Possessing as we do, *all* the elements of wealth and independence, we have become the poorest, (in this respect,) I had almost said, the most dependent state of the Union. But I have been depicting the past, and with pleasure I now turn from the gloomy picture: there is a bright spot on which I most gladly dwell. Mississippi may, and I hope will, ere many years roll by, become one of the first in this glorious constellation of states. Her soil for fertility cannot be surpassed; she possesses, also, every variety of climate requisite for the growth of all the grains, grasses and vegetables that are produced in any of the states. Hogs, sheep, horses and cattle, can be reared as well here as elsewhere. She has eclipsed all the states in the article of cotton; she may compete with almost any in the production of all the necessaries, and many of the luxuries of life, both for domestic use and for exportation. It is plainly perceivable, also, that she is awaking from the long, the fatal delusion in which she has been so long bound; the energies of her inhabitants, which are certainly of the most recuperative character, are thoroughly aroused. We now scarcely ever hear of a planter buying corn; (formerly but few made more than one-third of their supply.) Many now raise all their meat, and manufacture their own negro cloths, both cotton and woollen, and raise also their horses and mules, and every article of domestic consumption. There are also other prominent signs of improvement and reform springing up amongst us, not the least important of which may be mentioned—the more general circulation of agricultural papers, and the organization of agricultural societies. These two sources alone, if properly sustained, are calculated to produce almost miraculous effects towards our regeneration and permanent standing as an agricultural people, for which alone I believe we were intended. Let our inhabitants act upon the true policy, the sure foundation, (and cotton cannot fall many more cents per lb. before *all* will do it,) and they must, they will rise superior to every difficulty. As I before observed, God has blessed us with every necessary element of prosperity, wealth and independence. Let but the means we have be developed; let it be our ambition to merit and obtain the proud appellation of a great agricultural (not cotton growing) state; let us first supply ourselves with all the necessaries of life, besides which we can furnish England with cotton, and then, but not till then, can we truly call ourselves entirely independent. This point I think we are approximating; it will, however, take time and much perseverance to root out the evil of past days, yet I have no doubt the proper course will be pursued, and the end ultimately accomplished.

T*******.

Wilkinson County, Miss., April 1, 1843.



Columbia Pig.—(Fig. 41.)

COLUMBIA PIGS.—(See Fig. 41.)

Messrs. Editors—Enclosed I send you a rough cut (though an excellent likeness) of Betty, one of my Columbia pigs; also a short description of this breed of swine, together with the weight and measurement of some of them.

Betty (entered as a shoat) and Victor, (both of which took the first premiums at the late Fair of the American Institute,) were taken from the sow at seven weeks old, and fed with the wash of the dairy and a little meal, at first five times a day, and afterwards three times. Their feed was gradually increased until they were six months old, when the quantity of meal was about three quarts a day for the two. Victor, when six months and eighteen days old, weighed 353 pounds.

Four of the poorest of the same litter were killed in New-Lebanon, Columbia co., N. Y., in December last, three at eight months and twenty-six days old weighing 262, 282, and 315 pounds; one at nine months and six days old weighing 324 lbs. They have small bones and heads, great length of body, are heavy in the hams and shoulders, quick growers, easy keepers, and made to weigh 400 to 500 pounds, at twelve to eighteen months old, with ease.

Pocahontas, their dam, in store order, is supposed to weigh upwards of 500 pounds.

	Age.	*Length.** ft. in.	*Girth.* ft. in.	*Height.* ft. in.
Pocahontas,	at 3½ years,......	6 11½	5 4½	2 8
Victor,	" 7 months,.....	6 4	4 4	2 6
Betty,	" 7 "	5 9	4 2¾	2 2

In forming the Columbia breed, I cannot give you the names of those I used; for if they had any, (Berkshires excepted,) they were unknown to me. I merely selected animals that excelled in those points in which I thought my stock deficient.

They are much longer in body and smaller in the head, than the Berkshires I am acquainted with, (which I think an excellent breed,) with other points equally good, a much heavier hog, and very easy keepers.

CULTURE OF RUTA BAGAS.

Last season, on my ruta bagas, I tried unfermented barn-yard manure, bone dust and poudrette, in the proportion of a bushel of the two latter to one ox-cart load of the former. Ground the previous year in potatoes. The yard manure was spread and plowed under as soon as taken out in the spring, and left in that state until the 20th June, when the ground was again plowed and thoroughly harrowed, the drills marked out, and bone dust, in the quantity before mentioned, sowed in the drills, except where the yard manure had been spread. In one of the drills, a like quantity of poudrette was sowed instead of the bone dust. The seed was them sowed, and it came up tolerably well. In a few weeks, there was a great difference in the appearance of the piece, the tops where the bone and poudrette were put almost covering the ground, while the balance of the piece was almost naked. On gathering the crop, that where the bone and poudrette were put, yielded at the rate of 700 bushels per acre, while the others were hardly worth gathering.

H. W. Tibbits.

Yonkers, Westchester Co., N. Y., Feb. 23, 1843.

YOUNG DENTON.

Messrs. Gaylord & Tucker—As many breeders of the improved Durham Short Horn cattle in the U. States believe Col. Powell was the importer or once the owner of Young Denton, (963,) and were led into that error by the 2d vol. of the Herd Book, you will confer a favor on many friends of the late Stephen Williams, Esq. of Northboro, Mass., that feel an interest that he, the first importer into the United States of this valuable race of cattle, should have the credit he was justly entitled to. Mr. Williams not only imported Young Denton in 1817, but in 1822, he imported Arabella, by North Star; and it was through him and his brother, Charles Williams, Esq. of London, that Col. Powell obtained his Stately, Mr. Joseph Lee his Harriet, and Israel Munson, Esq. his Tube Rose, all from the herd of Mr. Wetherel.

Young Denton, (963,) bred by Mr. Wetherel, was imported by Stephen Williams, Esq. of Northboro, Mass. He arrived in Boston in November, 1817, then sixteen months old. He was kept on the farm of Mr. Williams at Northboro, except a part of one or two seasons he stood at the farm of Gov. Lincoln in Worcester, until he was taken to Maine in 1827 or '28, where he died, April 16th, 1830.

By some unaccountable blunder, Young Denton (963) is entered in the 2d vol. of the Herd Book, p. 60, as being sold by Mr. Wetherel to Col. Powell of Powellton, near Philadelphia. Col. Powell never had any interest in him other than having purchased of Mr. Williams many of his get, i. e. Prize, Fairy, Julia, Lucinda, &c., one-half and three-fourths blood animals.

Mr. Williams, in a letter to me, said: "I can show by his (Mr. Powell's) letters and my journal, that *Denton** was on my farm a year or eighteen months before he knew there was such an animal in the country; and when he did see him, he exclaimed in his *extra way* in his praise."

Henry Watson.

East Windsor, April, 1843.

TAN AS A FERTILIZER.

Messrs. Editors of the Cultivator—I avail myself of the opportunity you afford me by the inquiry of Mr. J. W. Saunders of Buckingham, Va., to give you some information respecting the real value of tan as a manure, and to point out the mode of using it most advantageously. It is indeed a subject hitherto not satisfactorily resolved, whether the residue of the bark of oak, after having been employed for the purpose of tanning, can be of any utility to agriculture. I have investigated the matter thoroughly, and made several comparative experiments, and the following is the substance of precise results I have obtained during several years of trial.

Tan, as such, is almost inefficacious, and even detrimental to certain soils; but blended with vegetable substances, especially when these are green, and then subjected to violent and long fermentation, after the manner of my method, it may be successfully applied to every soil, not as constituting manure by itself, but as a retainer of the properties of my lye, and as hindering the escape of the carbon which is in the soil; for by the operation of tanning, the bark has lost the greater portion of the salt and alkalies which every woody fibre contains. Tan, however, has still some stimulus, which, in contact with lime, serves to excite the humus and make it soluble.

If, then, your Virginian inquirer would like to follow my method in the reduction of his tan into manure, he must mix it up in a heap of vegetables; without mixture, it is impossible to effect fermentation sufficiently powerful to cause the decomposition of the tan, inasmuch as the latter, by the operation previously undergone, has been deprived of its fermenting faculties, and has become an inert substance. If he chooses to make use of his tan in its natural state, and without any other preparation, meadow land is the best recipient for it; there its utility is most certain, for it increases the vegetable bed, warms the new plant, checks the emission of the carbonic acid developed in the soil by manure or by vegetable or animal matter; there it is the most speedily decomposed, by reason of the greater abundance of humidity. However, it is well to mix a little plaster of Paris with it.

I profit by the occasion to acquaint a number of correspondents who have directed to me inquiries concerning the reduction of several kinds of peat, muck or swamp mud, that this matter is carefully treated in a work I shall soon publish, under the title of "Bommer's Large Method of Making Manure." If I have postponed answering some of them, it is because their inquiries were of such a nature as would have occasioned me too much writing; and then I did not like to treat partially a subject, a connected view of which forms a prominent part of my large method.

Subscribers to my abridged method, now in circulation, are informed that I will direct to their address, without any additional charge, a copy of my large method, as soon as it appears.

Geo. Bommer.

New-York, 17 Rector-st., April 13, 1843.

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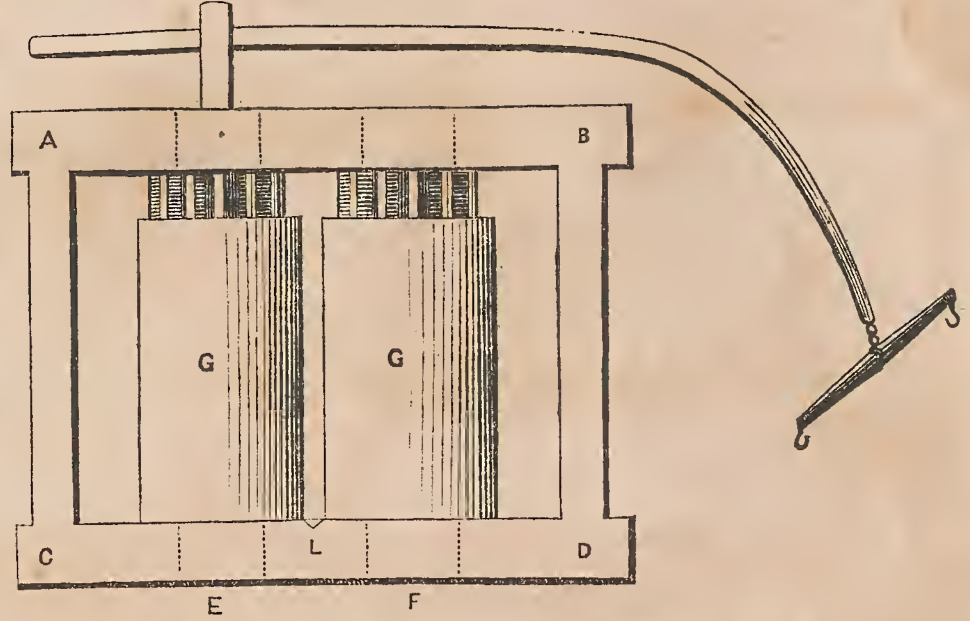
* From end of nose to root of tail.

* Mr. Williams always *called* the bull *Denton*, without the addition of *Young*.

CORN STALK SUGAR.

Messrs. Gaylord & Tucker—I have received various letters asking information relative to the construction of Mr. Vaughan's mill for making sugar from corn stalks, the manner of cultivating the corn, the process of manufacture, &c. To save the trouble of future inquiries, I send you a description of the mill, with a rough draft, which you will oblige me by inserting in the Cultivator.



VAUGHAN'S CORN STALK SUGAR MILL.—(Fig. 42.)

Explanation.—A. B. C. D. The frame—G. G. The bodies of the rollers—L. Depression in the platform for the juice to run out.

The mill (fig. 42,) is composed of two upright rollers, one 58 inches, the other 46 inches in length, which are secured by a strong frame, 8 feet long, 3 feet wide, and 30 inches high. Seventeen cogs on one roller, work in an equal number of cogs on the other, and are moved by a sweep. The short roller has a body 24 inches long, with a diameter of 20 inches; a neck piece at top, to be inserted in the frame, 8 inches long, 10 inches diameter; a cog space immediately under the top neck, 6 inches long, and 17½ inches diameter, and a neck piece at bottom, 8 inches long and 10 inches diameter, making its entire length 46 inches. The long roller is of the same dimensions, with similar body, neck pieces and cog space, with the exception that 12 inches are added to the top neck of the long roller, for the insertion of the sweep.

In grinding, the stalks are passed by hand betwcen the rollers, and the juice is squeezed out on their passage. If not sufficiently pressed out on their first passage, they are returned a second time between the rollers. The juice is caught by the bottom piece of the frame, which is 3 feet wide, like a platform, and made sloping on one side, so as to make it all run out into a vessel placed there for that purpose.

After the juice is obtained, it ought not to stand more than an hour, for fear of fermentation. It is then placed over the fire, and as it begins to boil, carefully skimmed. When boiling, the scum should be rapidly removed as it rises. If some of the syrup can be taken between the thumb and finger, and when moderately cool, a thread a half inch or inch can be drawn, it is thought to be boiled sufficiently. If you wish to make only syrup, it is not boiled quite so much. To make it grain into sugar, a few spoonfulls of lime water has been recommended.

The only fixtures used by Mr. Vaughan in boiling, were a common ten gallon pot, and three others of about the same size. The process is neither intricate or tedious. Corn standing in the field, may be cut, ground up, and converted into an elegant syrup in three or four hours.

From the foregoing description, it will be seen that the principle upon which the mill is constructed, is the same as that of Mr. Webb's of Delaware, as described in the June No. of the Cultivator for 1842, with the exception of the dumb returner or third roller, which is not found in Mr. Vaughan's mill. The process of boiling and manufacture is the same. Neither the plan of the mill or process is new. Mills of a similar description have been used by planters in the lower part of Georgia, for making sugar and molasses from the sugar cane, for family use, for the past twenty years. To Mr. Webb of Delaware, is however, due the great credit of subtituting corn stalks for canes.

Is it profitable, is a frequent question. Mr. Vaughan thinks he can make sixty gallons of molasses per acre, which, at present prices retailing in this country, would yield a profit of 25 or 30 dollars to each acre. When the manufacture becomes common in the west, such is our unbounded capacity for making corn, of course the profits would be nominal. But if only made for family use, it will be a great saving, and become, when we get in the way of making plenty of molasses, an actual blessing to children and negroes. Three days are sufficient to grind and manufacture 60 gallons of molasses, and the work will come on when the time can be easily spared for it. The refuse juice is valuable for making a most grateful beer and good vinegar.

As to making sugar, Mr. Vaughan failed in his attempt the past season; but he will plant 15 acres this spring, and "try again." His failure, he thinks, was altogether owing to late planting, which did not give his corn time to mature, and to heavy frosts which injured the juice before he could grind it. Cost of mill, $6,00.

Caledonia, Henry co. Tenn., March 29, 1843.

CHEMICAL MANURES.

Messrs. Gaylord & Tucker—In answer to Mr. Manly, in his criticism on my article relative to Liebig's assertion that ammonia will decompose sulphate of lime on the land, I must inform Mr. M. that if he had read the first article I wrote on the subject, he would have found it predicated entirely on a partial change being produced when ammonia is presented to sulphate of lime.

I am aware that a neutral salt will be partially decomposed, by presenting to it an alkali having a weaker affinity for the acid of the salt than the alkali or alkaline earth previously in combination, as the last portion held by an acid, near the point of saturation, is retained by a weak affinity. Berthollet asserts "that the force of affinity acts most powerfully when two substances first come into contact, and continues to decrease in power as either approaches the point of saturation." Again, "that in elective attractions the power exerted is not in the ratio of the affinity simply, but in a ratio compounded of the force of affinity and the quantity of the agent; so that quantity may compensate for weaker affinity. Thus, an acid which has a weaker affinity than another for a given base, is capable of taking part of that base from the acid which has the stronger affinity for it; so that the base will be divided between them in the compound ratio of their affinity and quantity."

Such laws of chemical action do not, however, warrant the unqualified assertion of Liebig, that ammonia will decompose plaster of Paris at atmospheric temperatures, leaving as residuums sulphate of ammonia and carbonate of lime.

I observed in my article, criticised by Mr. M., that near the boiling point ammonia would decompose sulphate of lime chemically, and that in cooling, the original affinities would again resume their influence. The power of decomposition will, therefore, vary as the temperature of the materials; it will be greater as the temperature increases, and diminishes as it decreases.

I would inform Mr. Manly, that I use Ure's tables of affinities, published in London, in the year 1835, and would be obliged if Mr. M. can recommend any of later date equally correct. **Wm. Partridge.**

New-York, March 27, 1843.

LAST SALE OF BERKSHIRES.

Messrs. Editors—Allow me to thank you for your kind correction, in the last number of the Cultivator, of the premiums awarded to the Berkshires at the Planter's Club in Georgia, and also for the friendly notice and recommendation of our Berkshires to the breeders of this state. But from circumstances which have transpired since our last communication, we cannot avail ourselves of the kindness meant us, having just sold our remaining reserved lot of Berkshires to Colonel John Bonner of White Plains, Green county, Georgia, together with our good will as breeders of the same. They consisted of six sows and two boars, all choice and very superior animals, including Ontario and Lady Huttleson, the two only remaining animals of our last importation, sent us out by Mr. Hawes, and which we flatter ourselves would not suffer in comparison with any of their kind, either imported or bred by any other person in the union. The produce from Ontario have uniformly been superior to any hog we ever bred from, and are warranted in saying that his produce has met with the decided approbation of our customers, which renders the possession of such an animal a high privilege to his enterprising owner, and a great acquisition to the community of the state in which he is placed.

From the number and superiority of the animals sold Colonel Bonner, together with his purchases made from the principal breeders at the north, fully warrants us in saying that we believe Colonel Bonner possesses some of the best blood, and most probably the finest selection of Berkshires to be found in the union; and take great pleasure in recommending his stock to all breeders of Berkshires, particularly to those persons who anticipated honoring us with their future orders, as we are fully assured that all orders entrusted to Colonel Bonner will be fully and promptly met, and with the most unscrupulous honor.

We believe that the first Berkshires of the improved race imported into the union, were owned in our family; consequently, since the year 1824, we have been before the public as breeders of the same, and from which time to the present we have sold a great number of hogs into almost all the states in the union, and also the Canadas, whether for good or evil to the country we will leave the community to judge.

We again most respectfully solicit the attention of the public to Colonel Bonner's stock of Berkshire hogs, and with our continued good wishes for the increasing success of your valuable journal, and our grateful thanks to our numerous patrons, we make our bow to the public, and retire from the business altogether. **A. & G. Brentnall.**

Canterbury, N. Y. April 17th, 1843.

SILK CULTURE.

Messrs. Editors—One of the advantages attending the reeling of cocoons in large filatures, in Italy, &c. is that a larger selection and assortment of cocoons can be made, so as to reel a quantity of the same character of raw silk together, and make the bales of silk uniform.

There is, however, more industry in our country, and the following is suggested as being more suited to the interests of our agriculturists.

Suppose a few few families in a neighborhood each raise 50 or a 100 bushels of cocoons, which they could do without hiring labor, generally, and all using the same eggs, collect the product together, and take in turn to assort all of a kind separate, and appoint one or more to reel them, as can best be arranged, and send *to market the raw silk* on their own account. This plan would realize the greatest gain to the growers, and make the silk of most value to the manufacturers.

New-York, April 6, 1842. **G. M. Haywood & Co.**

"YANKEE OXEN AND DRIVERS."

In a late number of the New-England Farmer, I notice an article with this caption. The writer, among other things, says:—"The breed of New-England working oxen have had a good deal of practice. The Puritan followed them two hundred years ago." * * "They are undoubtedly the finest race of working cattle in the world. But the committee on working cattle at Albany, last fall, I see by the Cultivator, seem to think it necessary to cross them with *foreign stock.* Of *course,* by all means! Nothing purely *American* would do; at least it would seem so in the meridian of Albany."*

Now I would ask in the first place, with what propriety it can be said that "the breed of New-England working oxen was followed by the Puritan two hundred years ago?" Could the cattle kept by the Puritans "two hundred years ago," be called a "New-England breed," or had those cattle sufficient distinctness of character to be claimed as *any* breed? And will it be said that the "New-England breed" of cattle at this day is the same as that which the "Puritan followed?" "Nothing purely *American* would do," says this writer. Have we a breed of domestic cattle which can be called "purely *American?*" How could such a breed have originated, unless they have been bred from the American buffalo or bison? But this "New-England," however it may have originated, is "undoubtedly the finest breed of working cattle in the world!" Yes, "*undoubtedly!*" Is the experience and observation of the writer sufficiently extensive to justify this broad assumption? And suppose it is conceded that these cattle are the "finest," is it the *breed,* or the *training* and *management* that has made them so? But the prominent idea of this writer is, that the best cattle for work, are directly descended from those which the "Puritan followed two hundred years ago." I cannot believe this to be correct. I know it is an idea quite common among the New-Englanders; but how it originated, I never knew, unless it sprang from the general habit of reverencing everything which has descended from the "Puritan" fathers. It appears to me that such a conclusion could never have been the result of fair experiment, comparison or observation. Several years' practical acquaintance with different varieties of cattle in New-England, united with close observation, have satisfied me that the best working cattle in that section have been produced from importations, (and crosses from them,) which have been made within the last fifty years; and if any one will take the pains to investigate the matter—to trace back the genealogy—I will venture the opinion, he will find that nearly all the most celebrated working oxen in New-England—such as have carried prizes at the cattle shows for the last twenty years, and have been sold at the highest prices—have had more or less of either the Bakewell Long Horn, the improved Short Horn, the Hereford, or the North Devon blood in them. I have attended many of the New-England cattle shows, have seen the best New-England cattle, and have not formed these opinions hastily. Where could we look for a fairer test of the powers and abilities of the working ox, than among the lumbermen of Maine? In that frosty region, where the average annual depth of snow is from four to five feet, the hardy and industrious inhabitants carry on an active business in winter, by cutting down the extensive forests of pine, and preparing the logs for market. To plow through those deep snows with the enormous logs which are hauled, the hardiest and most powerful oxen are required; they must be both strong and active. Ask those lumbermen what was the blood of the best cattle which they have employed in this business for the last twelve or twenty years, and so far as they can tell, you will find it to have been descended from stock imported within a comparatively few years, by Mr. Vaughan, Mr. Thorndike and others, or that it has sprung from bulls of the Bakewell, improved Short Horn, or Hereford breeds, and their crosses, which have been carried to that region of country.

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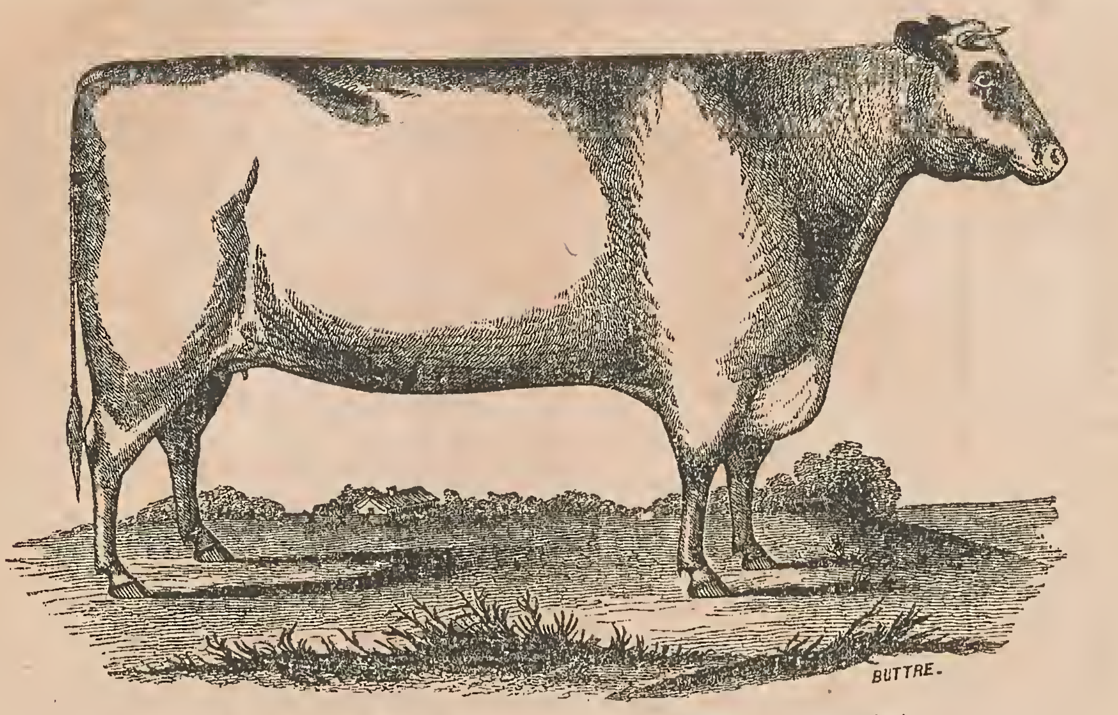
* This witticism loses much of its force—if force it has—when it is recollected that three of the five gentlemen who acted on the viewing committee on working oxen at Albany, were from New-England, and were probably quite as well acquainted with the working oxen of Massachusetts, Connecticut, and Vermont, as the writer of the above flippant quotation. The report and recommendation referred to, emanated from Robert Colt, Esq. of Pittsfield.—Eds.

But I have not time to enter into details in this matter. There are extremes on this, as on other subjects. Some who have chosen a particular variety of foreign stock as a hobby, are apt to imagine that no other breed has any merits. On the other hand, there are those who obstinately refuse to try any change from the "native breed;" standing in a similar situation to the Irishman who refused to try any other kind of wheat than that which his great great grandfather had used, on the plea that it was "*nathral*" to the soil. The blindness of prejudice is the "sin that most easily besets us," and against that we should be constantly on our guard. We should learn to judge from *principle*, and before our opinions are made up on any subject, it should be understood. There are and will be diversities of opinion on the relative merits of different breeds of cattle, for the same purposes and for different purposes; and I know of no more important service which could be rendered by an agricultural society possessed of sufficient means, like your State Society, than to institute a series of properly conducted experiments, by which the truth on this subject should be elicited and diffused. S. HOWARD.

Zanesville, O., March 5, 1843.



IMPROVED SHORT HORN HEIFER "HEBE."—(Fig. 43.)

THE PROPERTY OF MAJ. J. B. DILL, AUBURN.

At the Fair of the New-York State Agricultural Society, held at Albany, Sept. 1842, "Hebe" received the first prize as the best two year old heifer. The portrait, particularly in the head, does not do justice to the heifer, which was commended by the judges as "a very superior animal." HEBE, a pure white, calved April 1, 1840—sired by American Comet—dam, Gazelle, by Charles, 1816—g. d. Crocus by Romulus, 2563—g. g. d. Prize by Marlbro, 1189—g. g. g. d. Tulip by Regent, 546—g. g. g. g. d. Primrose by North Star, 459—[See Herd Book.]

☞In giving the pedigree of Gazelle, in our last No., an error occurred in the No. of Regent. It should have read 546, instead of 516.

PRODUCT OF DAIRY COWS.

EDITORS CULTIVATOR—I notice in the last number of your paper a proposition of Mr. Sotham, at Hereford Hall, to ascertain the product, for the current year, of his dairy of Hereford cows, for the benefit of the public. I entertain the opinion that it is only by pursuing this course that the public can ever become enlightened on this subject. We have had theories and opinions, unsubstantiated by facts, in abundance; we now call for *proof* of these theories, and it can only be furnished by experiments of this character. The isolated cases which have been exhibited as tests of superior milking qualities in some of the improved breeds of cows, in my judgment prove nothing. Similar examples can be shown respecting any breed. It is not enough that a single cow, for a single week, yields a large product, upon high keeping. Place, with ten or twenty others of the same kind, this cow, and keep them in the same manner that the native cows of the ordinary dairy farmer are kept; weigh and measure the products for the period of a year; and if they possess superior properties, it will by this process be made evident. I should be happy if some gentleman who has a dairy of Short Horns, will pursue this course and give the result. If there is such an one, I wish to state, for his encouragement, that from my dairy of twelve cows, (not one of which possesses a drop of royal blood,) for the current year, commencing 1st March, 1842, I made 6,403 lbs. of cheese and butter, or about 533½ lbs. per head—the cheese weighed when cured and sold. There is no *estimate* here; it is the *actual weight*. The feed of the cows was grass and hay alone, no meal or roots being used. Mr. Sotham is going ahead on the right principle: success to him. In this way we shall become possessed of the truth, which in these days of humbug and moonshine, is a great desideratum. Respectfully yours, JAS. T. NORTON.

Goshen, Conn., April 17, 1843.

THRESHING MACHINES.

MESSRS. EDITORS—From the great need of good Threshing Machines for the use of fertile prairie farms, I take the liberty of soliciting the favor of your informing me where this valuable desideratum can be found. (Its true we have them in plenty, such as they are, but they are rather complicated and too expensive.) I wish to procure one of simple construction, suitable only for such individuals who have farms sufficiently large to justify the erection of one on his own premises, and one that will thresh out say from 100 to 150 bushels per day. The object I have in view, is to establish a manufactory of such an article, if the design of a suitable one can be obtained.

I have long felt quite satisfied of the economy arising from having one on the farm, stationary, as in unpropitious weather for out door employment, your farm hands can go to threshing out grain. If you can oblige me by an introduction to any patentee or manufacturer of this article, I need not say you will confer a favor not only on your communicant, but a large community of industrious farmers. Respectfully yours,

Laporte, Ia., April 10, 1843. JAMES WHITTEM.

PORK AT THE WEST.

THE Cincinnati Gazette has lately had several papers on the pork trade of the west, and particularly of Cincinnati, which have much interested us, as exhibiting the rise of that business, its present extent, and the vast magnitude it may be reasonably expected hereafter to assume. We have room for only a few facts gleaned from the Gazette, which it will be seen corroborate the positions assumed by us in some late remarks on the oil trade of the west.

The pork trade of the west does not date more than twenty years back; when from five thousand to ten thousand hogs were cut in a season. The farmer who drove his hogs to market, then paid the butcher from 12 to 20 cents per head for killing, and the butcher retained the offal as at present. The butcher now pays the farmer from 10 to 25 cents premium for the privilege of killing. The number of hogs killed at Cincinnati is this year estimated at 250,000, and a capital of about two millions of dollars is employed. Hogs are driven to the Cincinnati market from parts of Ohio, Kentucky, Indiana and Illinois; few, however, from a greater distance than 200 miles, and the greater part within a circle of 300 miles in diameter, of which that city is the centre. Within the above district it is estimated that 500,000 hogs are prepared for market; and of this number 75,000 are raised in the Wabash valley alone. This is an important fact, as it may reasonably be expected, that now when the Erie and Wabash canal is completed, a large portion of the pork from this fertile valley, will find its way through our canal to New-York.

In driving hogs to market, the farmers frequently club together, each one having his hogs marked, and drive them to market in droves of from 500 to 1,000; though the farmer sometimes sells to drovers, who purchase by the gross weight living. Such droves will travel from 6 to 10 miles a day, much depending on the state of the roads. The Berkshires are said to be the best travelers. This fact is worthy of notice, as it disposes of the principal objection to their introduction and spread in the west. There are a great variety of breeds of hogs in the west, such as the Chinese, Irish, several English, and the Russian breeds, with a multitude of crosses. "Hogs have been raised here weighing over 1200 lbs., but the average weight is from 200 to 250 lbs.—the latter size being the most desirable." This must refer to packing pork of particular kinds; as where they are intended for lard, from 300 to 350 lbs. hogs, well fatted, are found the best.

The western pork differs from the eastern in one respect. What food they receive while fattening is corn exclusively. The various methods of making pork practiced in the east, such as feeding apples, boiling potatoes, using barley, &c. are unknown at the west. The hogs are taken from the forests in many instances, and turned at once into the corn fields, where they remain till driven or sold. Of one thing the foreign purchaser of western pork may be certain; his pork has not been fattened on mutton; sheep are too valuable there for such purposes. This year a large portion of the western pork has been packed with direct reference to sales in Europe, and prepared in the English mode. Should the trade succeed as it now promises, a market for pork and lard will be secured, which will prevent the fluctuations which has hitherto attended the pork trade of the west.

MASS. PREMIUM FARMS.

WE find in the N. E. Farmer of March 8th, the statements of the several successful candidates for the premiums on farms, offered by the Ag. Society of that state, and have examined them with much interest, as showing how much can be done in a short time to improve farms, where there is energy and intelligence in the occupant. If we wished to convince any of our readers—we hope there are none who doubt it—that manure is the great source of agricultural wealth, and the means of making and using it the surest proof of agricultural success, we would request them to procure and read these statements for themselves; for though necessarily brief in the replies to the propounded queries, on this point they are perfectly conclusive. We shall make a few extracts, and first from the paper of Mr. Morgan of Palmer, in reply to query 20, "What are your means of making manure?"

Last year fatted 28 hogs. I furnished them with muck from the banks of ditches, turf from the road side, weeds, and every thing of the kind I could collect. Fatted 66 wethers, which I sold for $585. Also fatted 57 oxen, and wintered 51 head of cows, steers, and young cattle, and one span of horses. My entire stock was kept on cut feed. The whole labor was performed by two men. I am fully persuaded this process is a great saving of fodder—I think at least 20 per cent. Carted from my barn, 767 loads of manure last spring. Have now 103 head of cattle; 24 horses fitting for market, and have 97 sheep. One barn is 123 feet long, by 36. Have a cellar under the whole barn; can drive in with cart and oxen. Nearly all my manure is covered. Average weight of my 28 hogs, 329 lbs. Through the summer and fore part of the fall, fed them on raw potatoes and apples, with one bushel of corn once in two days, buried in holes in the muck, for them to root over. Carted from my hog pen last spring, 443 loads of manure.

This was an old worn out farm in 1839, of 145 acres, and purchased by Mr. Morgan, at that time, for $2,140, crops included. Of his land, he had in 1842, in tillage 21 acres, in mowing 55, the remainder pasture and woodland. Who can doubt that he has, as he says, doubled his crops of grain and grass, when they look at his manure heaps. More than twelve hundred loads in a year from a farm of 145 acres; how few are the farmers who provide the same supply, no matter how great their number of acres.

This other statements agree with Mr. Morgan's, in the importance attached to manures, and in their efforts to increase the quantity used on their several farms. Thus Mr. Harrison says:—I make manure in a vault, in which I keep six or eight hogs for that purpose; I cart in earth, ashes, lime, all the filth of the house, and all I can get from low places. Through the summer, I feed my hogs with the wash of the house, and mow clover for them. I also bury corn in the vault, with a view to make them stir up and dig over my dung. I fat them by boiling potatoes and pumpkins, mixing in while hot, barley meal, to scald it. Mr. Richardson carts peat or swamp muck into his barn yards and hog pen, with wash from the road side, potatoe tops, weeds, &c., and puts peat under all places where he throws out manure, to save all the leaching. In the spring, mixes all together with the best effect.

The business of making manure is too much neglected by farmers generally. There can be no doubt that nearly every man who works a farm, might double the quantity of manure produced annually. It is true it would require labor; but in what part of the farming process is the laborer so certain of ample reward, as when increasing his manure heap? All experience proves that expenditures for this purpose, are investments of capital that return to the farmer an interest that should satisfy the most penurious.

FAITH AND WORKS.—There is no pursuit in life in which the union of faith and works is more necessary, or productive of better effect, than in that of farming. This is well illustrated by the following little story, which we have somewhere heard or read. At the early settlement of New-Hampshire, the inhabitants of a town in the interior consisted chiefly of Irish or Scotch Presbyterians, who among other things, adopted the following custom. When their fields were planted and sown, the minister, with his elders, deacons, and the farmers, visited each field in succession, offering up a short prayer at each, that their labors might result in a plentiful harvest. One day the procession engaged in this pious preambulation arrived at a field, where the minister stopped, took a quick but keen survey, and then addressed his flock to this purport: "My friends and brethren, we may pass along; it will be of no use to pray over this field, till there is more manure spread upon it; otherwise, even the prayer of a righteous man, however *fervent*, cannot be *effectual*."

Veterinary Department.

DISEASE OF COWS.

Messrs. Editors—A friend of mine lately lost a very valuable cow, soon after calving, under the following circumstances. She calved and did well to all appearance at first, but soon began to be affected in her fore quarters; if she attempted to walk, her fore feet remained stationary, while her hind ones moved around circularly. She soon died. She had been kept well for three or four years, and was so fat, that when she died, 100 lbs. of tallow were taken from her. As it is an uncommon case among us, permit me to inquire of you, or some of your numerous subscribers, the nature of the disease, the remedy, &c. S. W. Bartlett.

Scantick Village, Ct.

The case noticed by our correspondent is one of *puerperal fever*, or as it is termed by veterinarians, "*dropping after calving.*" Cows in high condition are most subject to this disease, which usually appears in from one to five days after calving. The first symptoms are decidedly febrile; the animal is restless, shifting her feet, and breathing laboriously. The nose is hot, and the udder is inflamed, enlarged, and tender, from the very commencement. Bleeding, from six to ten quarts, to be regulated by the impression made on the circulation, must be resorted to at once, and the bleeding must be followed by physic; for which purpose, a pound or a pound and a half of Epsom salts are best, and half pound doses every six hours, till the bowels are opened. If the disease is not attended to in the outset, and it is too frequently neglected, the nervous system is speedily attacked, when the symptoms of staggering, &c., noticed by our correspondent, usually occur. It is occasioned by a partial paralysis of the fore or hind quarters, most commonly the last; the animal soon falls, her head is bent back to her sides, and death soon supervenes. In the last stages, there is little hope or chance of relief; but if the pulse is such as to indicate fever, bleeding may be resorted to till the last, with a bare possibility of saving the animal; but great care is requisite, as the bleeding, carried too far, is fatal at once. In some papers in the Veterinarian, Mr. Friend relates several instances successfully treated by Epsom salts in large quantities, followed immediately by Croton seed and sulphur.

LICE ON ANIMALS.

If you have purchased any animals that were poor, or if you have most unwisely allowed any of your own to become so, now is the time to examine all such carefully, and see that in addition to their being poor, they do not become lousy. There is not an animal that does not, under suitable circumstances, nourish in its hair, wool, feathers, or its skin, some kind of louse; and sometimes more than one kind of these parasites lodge and prey on the same animal. In ordinary cases, they do not produce much mischief, but when they increase so much as to produce the disease called *Phthiriasis*, they become truly formidable. The cause of animals being troubled with lice, may usually be traced to a want of cleanliness. When the dust and sweat accumulated on the hair, and in contact with the skin of the ox or horse, are allowed to remain undisturbed by the comb or brush; when the stables are kept filthy, unventilated, and unwholesome; when animals, reduced in autumn by want of pasture, or by living in unhealthy ones, are suffered to take their chance for the winter without extra care or attention; or when a beast loaded with pediculi, is turned into the yards or the stables of those exempt from these parasites, it may be expected that they will multiply, and infest animals. When we see horses rubbing their tails, biting their manes, and showing other signs of uneasiness and irritation; when cattle are observed to be rubbing their heads against posts or fences, and the hair coming off from the head and neck; or when sheep tear out tufts of wool with their teeth, and bite these places till blood appears, we may expect that lice are present. On most animals, these parasites have some favorite place of resort; on horses, the mane and tail; on horned cattle, around the nose, base of the horns, and the neck; on sheep, they run over every part; and on swine, they do not seem to be confined to any particular location.

Pure air, room for exercise, plenty of food, and above all, cleanliness, are the first things to be attended to in the cure of this evil. Currying, brushing and washing should be resorted to, as, except in bad cases, this treatment will be usually sufficient to free the animal from these insects, without recourse to other remedies. Where these fail, it will be necessary to have recourse to such external or internal applications as shall operate directly on the vermin.

One of the most common remedies is the mercurial ointment, *unguentum;* but this, though effectual, cannot be used without some danger, as numerous instances have occurred in which valuable animals have been destroyed by its use. When its use is necessary, care should be taken to prevent the animal from biting itself where the ointment is applied, until it has had time to take effect. A decoction of tobacco leaves, in a strong lye, forms a very good wash; but this, too, owing to the narcotic poison of the tobacco, has caused death. Various vegetable remedies have been resorted to, among which are the seeds of the *Delphinium staphysagria;* and the leaves and flowers of the *Ledum palustre*, or marsh tea. The roots of the black hellebore, or a decoction made from them, have been used with success; and it is said that the water in which the skins or parings of potatoes have been boiled, will effectually destroy lice by a few washings. The internal use of sulphur is an excellent remedy, and if given to animals occasionally, is one of the best preventives.

It is more difficult to apply remedies for lice to sheep, than to any other animals. The English shepherds make use of a salve compounded of white arsenic and corrosive sublimate, carefully parting the wool, and applying the ointment in small quantities directly to the skin, and rubbing it down with the finger. Tessier prefers tobacco smoke to this ointment, as involving less danger in its use. The sheep is held in such a manner that tobacco smoke is forced from a bellows among the wool to the skin in all directions. After this fumigation, the sheep must be placed in the open air, that the vapor may have room to pass off without being inhaled by them. Perhaps the best remedy for lice in animals, where they have not become so numerous as to produce the disease *phthiriasis*, is to rub any oil, such as whale oil or melted lard, on such places as they most frequent, or on parts of the animal where they will be most likely to come in contact with it. All the pediculi breathe through what are termed spiracles or openings in their bodies, and the least particle of oil spread over their bodies, by causing suffocation, at once effects their destruction. This is also a perfectly harmless remedy. But prevention in this case is better than cure; and neatness, cleanliness and good keeping, by insuring comfort and health, leaves no opportunity for the attacks of vermin.

COLIC IN THE HORSE.

There are few diseases more troublesome or dangerous to the horse than the colic; and it is usually in the winter that its appearance is most frequent. One of the best descriptions of the disease and its mode of treatment, is to be found in Stewart's Stable Economy, from which we have condensed the following.

"The horse is usually attacked by the colic suddenly. In the stable, he paws the ground with his fore feet, lies down, rolls, sometimes quite over, lies on his back, but at times, when the distension of the belly is not great, will sometimes lie still for several minutes. When the distension is great, he neither lies or stands still a minute, but lies down and gets up incessantly, strikes his belly with his hind feet, and looks wistfully at his flanks. When standing, he makes many and fruitless attempts to urinate, and the keeper or owner generally imagines there is something wrong with the water." Sometimes in the worst cases the swelling is very inconsiderable; but in all cases, as the disease proceeds, the pain becomes more and more intense; the horse dashes himself about with frightful violence; the perspiration runs off him in streams; his countenance betrays excessive agony, and his contortions are not suspended for a moment.

Sometimes he is attacked on the road. "If his pace is fast, he should be stopped at once. To push him on beyond a walk, even for a short distance, is certain death. The bowels are displaced, twisted and strangulated, partly by the distension, but aided a great deal by the exertion, and no medicine will restore them to their proper position." When death ensues, the bowels are found inflamed, twisted, and generally ruptured.

In the treatment of colic, the first object is to arrest the fermentation that is the primary cause, and re-establish the digestive powers. "In mild cases, a good domestic remedy, in common use among old fashioned people, who have never heard of inflamed, spasmed or strangulated bowels, is whiskey and pepper, or gin and pepper. About half a tumbler of spirits, with a teaspoonful of pepper, given in a quart bottle of milk or warm water, will often afford immediate relief. If the pain do not abate in twenty or thirty minutes, repeat the dose. Four ounces of spirits of turpentine, with twice as much sweet oil, is much stronger; but if the horse is much averse to the medicine, turpentine is not always safe."

"There is, however, a better remedy, which should always be in readiness wherever several draft horses are kept. Take a quart of brandy, add to it four ounces of sweet spirits of nitre, and three ounces of cloves. In eight days this mixture or tincture is ready for use; the cloves may still remain in the bottle, but they are not to be given. Set the bottle by, and label it distinctly, "Colic Tincture." The dose is six ounces, to be given in a quart of milk or warm water, every fifteen or twenty minutes, till the horse is cured. Keep his head straight and not too high when it is given. Do not pull out his tongue, as some stupid people do when giving a drink. Give him room, and if he will not stand till the drink be given, watch him when down, and give it, though he be lying, whenever you can get him to take a mouthful; but give the dose as quickly as possible. After that, rub the body with a soft wisp, walk the horse about *very slowly*, or give him a good bed and room to roll. In eight cases out of nine, this treatment will succeed, provided the medicine be got down the horse's throat before his bowels become inflamed, or strangulated, or burst. The delay of half an hour may be fatal. When the second dose does not produce the relief desired, the third may be of double or treble quantity. I have given a full quart in about an hour, but the horse was very ill."

Bottles are generally used for giving medicine to horses, but unless the neck is wound with twine, there is danger of the horse breaking it with his teeth, and injuring himself with the pieces. A large horn, with a small point for insertion in the mouth, is preferred by many, as exempt from this danger.

"DISEASES OF SWINE."

Messrs. Gaylord & Tucker—On looking over the last February number of your most invaluable agricultural periodical, I find an article bearing the above "insignia," by D. B. C., which had inadvertently escaped my attention, asking for information relative to a most peculiar and singular disease affecting swine; and it is with pleasure I now recur to the subject, and will extend to D. B. C. and all others, the experience, cause and cure of the disease, I have had.

D. B. C. states that "upon opening the barrow, a whitish jelly like matter, upon both sides, and the whole length of the urinary passage, was found; the flesh much inflamed and apparently bloodshot." In short, Messrs. Editors, I can say that all the cases I have seen or heard of, are precisely similar in symptoms, and all other respects to D. B. C.'s statement, and therefore will not consume your time in restating them, but will come at once to the point in view.

If D. B. C. had examined the entrance of the orifice of the urinary canal, I think he would have found a few coarse, long unnatural hairs, growing too far in and up the orifice or opening. When the animal makes an effort to urinate, there is retained, in consequence of these hairs, by the animal, invariably, part of the urine involuntarily, which by running on for some time, as was the case with D. B. C.'s hogs, collects and forms from putrefaction and other causes, the white jelly like substance abovenamed; and it is the large quantity retained in the urinary passage of this matter, which brings on the swelling and inflammation, and hence arises the difficulty of the animal to void its water.

I cannot well account for this disease, or the causes which produce it, unless I attribute it to the hairs spoken of; and attributing it to this, I cannot give any well grounded, and probably not even plausible reasons for it; only from the nature, tendency and bearing of the remedy I have used, I think the disease to be solely attributable to this cause.

The remedy I now give, and would advise D. B. C. and all others who have swine with this disease, to use, is very simple, plain and harmless, and I have never heard a single case in which it was tried, that failed.

Turn inside out, as far as convenient, the interior of the orifice of the urinary passage—then with a pair of pincers or nippers, pull out the long coarse hairs I have named, and with lard or other grease, mix salt, about half and half, and run it up the canal as far as possible, and rub it well, particularly around the inflamed parts. This I have always found to produce a running, which will carry off all this matter, and cleanse the parts thoroughly—cause the inflammation and swelling to go down in a few days—the animal to receive instantaneous relief, to urinate freely and without pain, and lastly the urinary passage to assume its natural shape, &c. in a few days, and the animal will thrive finely.

Should D. B. C. see fit to try this simple remedy, I should be pleased to hear from him through the Cultivator, and should this communication be the means of saving any of his swine, I shall consider myself richly and handsomely paid for contributing my mite.

I concur heartily in D. B. C.'s remarks, regarding the great value and usefulness of the Cultivator, and every good agriculturist ought not, and I like to have said, cannot do without it. Agricultor.

Talbot co. Md., March 20, 1843.

GLAUBER SALTS FOR SWINE.

Messrs. Gaylord & Tucker—I have made some experiments on hogs, which were very satisfactory to myself. One day as I was returning from a store, with a paper of glauber salts, I thought I would go and take a look at my hogs. It was in the evening, just before they were fed. While I was looking at them, the paper happened to burst, and the salts fell upon the ground. The hogs devoured them greedily. I thought I would try giving them some regularly for a week, and see what effect it would have upon them. They appeared more brisk and frolicsome, and I observed at the end of the week, that they increased rapidly in weight to what they did formerly. They were then but six months old, and in about two months they weighed 350 lbs., and judging from appearances, I should think they did not weigh more than 200, before I gave them the salts. I observed it made their necks very thick, their hind legs grew larger than their fore legs, and several hogs that were before black, became nearly white, and they all appeared to thrive well. Your ob't and humble serv't,

Port Deposit, Md. Feb. 19, 1843. Wm. Larkin.

Inflammation in the Eye of the Horse, &c.—From our correspondent, "Gleaner:"—"I had a horse hurt his eye the past winter, and I thought he would lose it; but I have restored it again. For inflammation of the eye, take sassafras twigs of one year's gorwth; take the inner bark, a handful to a pint of cold water; let it stand for a few hours; it will become thick, like the white of an egg; wash the eye out well; it will remove the inflammation. *For a Film on the Eye*, take loaf sugar; pulverize it as fine as possible; take a goose quill and fill it, and blow it in the eye, which will remove it. My horse was entirely blind, and the above cured him, so that he can see as well as ever."

The Garden and the Orchard.

ASPARAGUS.

It is not often that military men find time to pay attention to horticulture and gardening, but we find that Capt. Churchill, of the British Royal Marines, is an exception, since in an interesting paper to the London Hort. Society he has given an account of some observations made by him at St. Sebastian, in Spain, while the English army held that place during the late troubles in that country.

The Guipuscoan asparagus, produced at St. Sebastians, has long been celebrated, and it was to the cultivation of this that his attention was principally directed. It has been generally supposed that the Sebastian asparagus, which is from three to six or more inches in circumference, was a distinct variety; but Prof. Lindley says there is but one sort of asparagus, and the observations of Capt. Churchill prove his correctness. We copy that part of the paper that describes the culture, as from it we think the asparagus growers of this country may derive some useful hints:

"Asparagus is a plant found naturally on the beach of various parts of the coast of Europe, where it is covered by the drifting sand, and watered by salt water at high tides. Sand and salt water occasionally may, therefore, be regarded as indispensable conditions for maintaining it in health. How seldom is this thought of! It, however, in part explains the excellence of St. Sebastian asparagus. It seems that at the mouth of the Urumea, is a narrow slip of land about three feet above high water mark, consisting of alluvial soil, and the wearing away of sandstone hills at whose foot it is placed. This is the asparagus ground of St. Sebastians. Beds are here formed without any previous preparation, except digging and raking. In March the seed is sown in drills about two inches deep, and eighteen inches from the alleys, thus leaving a space of two feet between the drills. The rows run invariably east and west; doubtless that the plants may shade the ground during the heats of summer. When the seedlings are about six inches high, they are thinned to something more than a foot apart. Water is conducted once a day among the alleys and over the beds, so as to give these seedlings an abundant and constant supply of fluid during the season of their growth; this is the cultivation during the first year.

"The second year, in the month of March, the beds are covered with three or four inches of fresh night soil from the reservoirs of the town; it remains on them during the summer, and is lightly dug in during the ensuing autumn; the operation of irrigation being continued as during the first season. This excessive stimulus, and the abundant room the plants have to grow in, must necessarily make them extremely vigorous, and prepare them for the production of such gigantic sprouts as they yield.

"In the third spring the asparagus is fit to cut. Doubtless all its energies are developed by the digging in of the manure in the autumn of the second year, and when its does begin sprout, it finds its roots in contact with a soil of inexhaustible fertility. Previously to the cutting, however, each bed is covered in the course of March, very lightly with dead leaves, to the depth of about eight inches; and the cutting does not commence till the plants peep through this covering, when it is carefully removed from the stems, that the finest only may be cut, which are rendered white by their leafy covering, and succulent by the exceeding richness of the soil. In the autumn of the third year, after the first cutting, the leaves are removed, and the beds are again dressed with fresh night soil as before; and these operations are repeated year after year. In addition to this, the beds are half under salt water, annually, at high tides."

It appears clear from this statement of Capt. Churchill, that the excellence of the St. Sebastian asparagus is not owing to its being a new variety, but to the peculiar treatment it receives. Every one knows that much the larger portion of the asparagus grown in this country, or offered in our markets, is miserable stuff; dark colored and tough, and only occasionally showing what this delicious vegetable might be under proper cultivation. The Spaniards combine sand, salt, irrigation, and the most active of manures, in the growth of their gigantic shoots. We seem to think it will grow any where, and under any treatment. Should any object to such a liberal use of fresh night soil, it might be obviated by the substitution of poudrette and rich composts. Of all soils for asparagus a clay soil is the worst, and its character must be changed before the growing of this vegetable should be attempted. There is a very large portion of the lands in the vicinity of New-York suitable for asparagus, and in thousands of instances they might be placed so as to reap the advantages of salt water, as is done at St. Sebastians. Manure, also, of the best kind, may be readily obtained, to give the beds any desirable degree of richness. If we would retain any plant in perfect health and vigor, it must be allowed its natural habits as far as possible. In such a situation, cultivation and manures add to its size, and render it tender and succulent. Asparagus requires a large quantity of water to perfect its growth, as indeed do all plants, when rapidity of growth is desirable. In the wet climate of England watering is found necessary, and in our hot and dry seasons, irrigation would seem indispensable. We hope some of our Long-Island or New-Jersey friends, who have the means, will test the St. Sebastian mode of culture, and if successful, as we have no doubt they would be, they would deserve and receive the thanks of all asparagus eaters.

THE GRAPE IN MISSISSIPPI.

Most of our readers are aware that Mr. Affleck, the former talented editor of the Western Farmer and Gardener of Cincinnati, has left that paper, and become a resident of the state of Mississippi, bright eyes and broad lands being, as we understand, the cause thereunto moving. But old associations and feelings have, we are glad to perceive, not lost their influence; and a Report, made to the Horticultural Society of Jefferson College, last autumn, which we find in the Natchez Free Trader, from his pen, proves that he is destined, in his new location, to exercise a favorable action on the agriculture and horticulture of that district. The Report to which we have alluded is based on the visits of a committee of which Mr. Affleck was chairman, to the gardens in Natchez and its vicinity; and a most inviting display of fruit and flowers does it present to us. In truth, Natchez and its environs must be the Eschol of the southwest, so far as the grape is concerned. After noticing several varieties of the grape found there, the Report says:—"Of this, the Jack grape, the most valuable variety we have, there is an astonishing crop upon a single vine, at the residence of the Rev. James Carron, in Natchez—upwards of 2,000 bunches, almost all large and perfect. The vine is now supposed to be about eleven years old; its stem measures four inches in diameter, and its branches cover a space of four hundred and fifty square feet, being trained over head in his court-yard, at the height of about eight feet. This grape has been sadly overlooked, for the reason that it acquires its dark color some weeks before it is ripe, and when gathered at that time, its sourness renders it by no means palatable. But if allowed to hang on the vine until fully ripe, it not only proves itself to be a delicious and highly flavored table grape, but it is the opinion of this committee that it will be found valuable for wine-making."

In connection with this subject of grapes, we may mention that while at the north training on trellises, north and south, so as to give the greatest exposure to the sun, is found preferable to arbor training, the latter course is found most successful at the south, where the extreme and *long continued* heat renders protection rather than exposure desirable for this fine fruit. Of this, an instance is given in a late number of the Columbia Register of Agriculture, in which grapes trained on trellis work, north and south, always rotted from forced maturity; while the same variety, we think, trained on arbors or trees, and of course receiving protection, were of the best quality, and perfectly free from rot.

We think there is not sufficient attention paid to the culture of the grape among the farmers at the north, as they are easily cultivated, and the fruit is not only delicious but healthy, and forms one of the most inviting and best relished of the table fruits. It is true, none but the hardy kinds could be grown, and on some soils, and in some locations even, these could hardly succeed; but in most cases, where a vine can be trained against a wall or building, grapes will be produced in any part of the northern states. We strongly advise every farmer to procure a few plants or cuttings, of kinds known to be hardy, and make an experiment for himself. The trouble or expense will be trifling; the reward, if successful, will be abundant.

TRANSPLANTING TREES.

The farmer who allows a single season to pass without planting out trees, either for fruit, ornament, timber, or fuel, or perhaps for all these purposes, certainly mistakes his true interest. Every tree that is properly planted, adds to the value of the farm, since there are few of them that do not answer good purposes in various ways; and they certainly add much to the beauty of every place. There is no one who does not like the looks of a farm where the avenues are bordered with trees, and the yards properly planted and arranged with trees, shrubbery, &c. It takes but a few years for the maple, locust, elm, or ash, to grow up into valuable timber trees, and on most farms how many vacant nooks are to be found which might be filled up by these to advantage. How many families there are, where the parents, or the children, beg or steal all the fruit they have, who have land enough, (could they only muster a little energy to plant trees,) to furnish all the fruit they need for the year? How many of our farmer's houses stand naked and desolate, not a tree for fruit or shade near them? We have often wished that our farmers generally could read Mr. Downing's work on the subject of ornamental and other planting, as we are confident it could scarcely fail to produce a beneficial effect in the correction of these evils. It takes time to plant trees, it is true, and what improvement is made for which time is not required; and let it be remembered, that the man who husbands his time, who performs every thing when it should be done, always has his time at command, and will manage to accomplish thrice as much, as he who is forever an hour behind his time. Plant trees, then, every year. Fill up all vacancies in your woodlands; see that your highways are not forgotten; remember that a screen of evergreens is required by orchards and fruit gardens in all exposed situations; plant shrubbery and trees in your yards; and don't forget your fruit. If your fruit trees are well selected, there is no necessity of great numbers to furnish a succession of good fruit at all seasons. Never be content with any thing short of the best. One word as to planting the streets of our cities and villages. More failures are witnessed in these places than any where else; and although the cause is very obvious, it is rare that any efforts are made to obviate it. Grading and leveling in these places, in most instances, makes the surface of new earth, that which has never been exposed to atmospheric influences, or mixed with vegetable matter, and is consequently wholly unfit to nourish trees. Where planting is required in such cases, the holes for the trees should be made broad, and filled in with good mold; and if the soil is retentive, drains should be cut to prevent these holes from being constantly filled with stagnant water. Evergreens should be planted later in the season than other trees; June or July will do; though when proper precautions are taken, they may be removed at almost any season. The roots of trees should never dry during the process of transplanting; nor should they be cramped or mutilated, when it can possibly be avoided.

THE PEACH TREE.

The conclusion to which our correspondent, "J. H." of Preston, Conn. has arrived, in accounting for the fact that the seed of a particular fruit will in some instances produce fruit like that of the parent tree, and in others, entirely different, is undoubtedly correct, viz:—"that the flowers of one tree are impregnated by the pollen of others, thereby producing all manner of fruit; but where a tree is isolated, so that no such union takes place, the fruit will resemble the original."

J. H. further says:—"A. R. McCord is informed that ashes placed around the bodies of trees in the spring, will effectually protect them from the ants, besides aiding materially their growth. Soft soap, reduced to the proper consistence, and applied with a brush, will impart to all trees a fine healthy appearance. It will also destroy the Aphis, or tree louse. A dark green foliage, free from curls, indicates health in the peach, without which, good fruit cannot be expected."

Apples at the South.—In a late number of the Farmers' Monthly Visitor, are some remarks on the culture of the apple in the vicinity of Mobile. It appears that apple trees grow with great rapidity in that climate. In five or six years, the small trees brought from New England, had become large, and the Russetts, the Greenings, the Pippins, &c. which in Massachusetts hardly attain their full growth before winter, at Mobile, ripened in August and September, on the trees. The ripening was in succession; the fruit most exposed to the sun and air, first reaching maturity, and are gathered and sold as they ripen. So superior is the flavor, size and excellence of these apples ripened on the tree, that they can scarcely be identified with the same kinds of northern growth. For a number of years, the little orchard of the informant averaged him a return equal to fifty dollars a tree. This rapid maturity, however, is followed with as rapid decay; and the place of the failing trees had to be filled with other importations from the north. This effect of climate was not less striking on vegetables, such as the potatoe, beet, carrot, &c. The seeds of these he imported every year from the north; and for the first crop they surpassed in size and quality the northern originals; but degeneracy followed seeds produced from roots grown at the south.

Domestic Economy.

LARD LAMPS.

I was pleased on seeing the notice of lard lamps in the March number of the Cultivator. It is plain that if lard can be conveniently burned, it is much better than to burn stearine and the oil separately, as the expense of separating them is avoided. I have used lard lamps for more than a month, and decidedly prefer their light to any other. Instead of using glass lamps, however, I have used Neal's patent tin ones, which are preferable to the former in not being easily upset, and incapable of being broken, at the same time that they are more readily filled.

According to the experiments which I have made, sixty-five pounds of lard will supply two lamps in constant use for four hours in each twenty-four, the year through, and each give as much light as a common spermaceti candle. This amount, at present prices, could be afforded for four dollars; while I have generally paid from ten to twelve dollars a year for the same light from whale oil. The advantages which the lard lamps have over common candles, are, the light is clearer, they need no snuffing, and they are cheaper; while the trouble of filling them is no more than that of cleaning candlesticks. They have none of the unpleasant odor of oil lamps; unlike them, they do not soil the fingers with oil, as the latter often do; and are attended with less than half the expense.

Without wishing any evil to our New-Bedford and Nantucket friends, I would ask, how many dollars would be saved in this country, if each family now using oil should save its five dollars a year by substituting lard? And what would be the benefit to the pork raisers? The sum, I think, would be counted by at least hundreds of thousands. J. J. T.

FARM EMBELLISHMENT—BUILDINGS, FENCES.

There are comparatively few of our farmers who could afford to be at any considerable expense for rural embellishment alone; but we think there are many who would do more in this way than they now do, if convinced there was an actual profit in such expenditures, and that by improving the appearance of their farms, they were adding to their positive value and increasing their own means of comfort. The man who spends a few days every year in planting fruit and ornamental trees, is adding decidedly to the permanent value of his farm, as well as improving its beauty. The man who spends a few days, and perhaps dollars, in painting or coloring his barns, outbuildings, and fences near his dwelling, is very far from throwing away his time, or losing money by the operation. However slovenly and unthrifty a man may be himself, he is always pleased with a neat well managed place; and were he to be a purchaser, would always prefer paying well for such improvements, rather than have them wanting. The most careless observer is struck with the wide difference there is between two farms, on one of which all the buildings, gates, fences, &c., are just as they should be, all in good order and perfect repair; and another, where all is the reverse, nothing in its place, and nothing as it should be, and instinctively prefers the former. We do not advise our readers to engage in extravagant expenditures in any case; the times demand economy and retrenchment; but we should be gratified to see more attention given to rural embellishment, particularly where it can be done with little expense, other than the time and labor of the farmer himself.

Experiments abundantly prove that whitewashing, or otherwise coloring outbildings, fences, or wood work of any kind exposed to the air, has a powerful tendency to preserve it from premature decay; and certainly does much to improve the appearance of the farm on which such operations are performed. Whitewash, colored at the pleasure of the farmer, laid on once in three or four years, is one of the best preservatives of pickett or board fences, yet discovered; quite as good as the ordinary oil painting sometimes adopted. For the benefit of those who are willing to make improvements of this kind, we give the following methods, selected from a great number, as they may be depended on for good results, and are cheap and easy in their preparation:

Take 2 quarts of skimmed milk; 2 ounces of fresh slacked lime; 2 lbs. whiting; and the same proportions for any larger quantity. Put the lime into a stone vessel, pour upon it a sufficient quantity of milk to make a mixture resembling cream; then add the remainder of the milk. When this is done, crumble and spread the whiting on the surface of the fluid, in which it will gradually sink. It must then be well stirred, or ground as any other paint. By the addition of any coloring matter, you may make it suit your fancy. It must be put on with a paint brush, and when dry, a second coat should be given. The quantity named is sufficient for twenty-five or thirty square yards.

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To make a *fine stucco whitewash*—Take clean lumps of well burnt stone lime, (oyster shell lime will do as well,) slake with hot water in some vessel to keep in the steam, and then sift through a fine sieve; add ¼ lb. whiting, 1 lb. sugar, 3 pints of rice flour made into a thin and well boiled paste, 1 lb. glue dissolved by simmering over a slow fire. The lime must be the basis of the wash, and of that mixed with water and the above materials, enough must be used to make a wash of the proper consistence. It must be laid on with a brush, and while warm.

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Take one bushel of unslacked lime, and slack it with cold water; when slacked, add to it 20 lbs. of Spanish whiting, 17 lbs. of salt, and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use, after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. Two coats should be laid on wood, and three on brick. A whitewash brush may be used for laying it on, and each coat must be dried before the next is applied. This may be made any color you please. For straw color, instead of the whiting, use yellow ochre; for lemon color, ochre and chrome yellow; for lead or slate color, lampblack; for blue, indigo; or green, chrome green.

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There is one difficulty frequently attending the use of whitewash, and that is, it comes off in flakes, or the coats separate from each other, or from the wood. This is occasioned by its being put on too thick, which should be strictly guarded against. The wood is affected by the alkali of the lime, and the first coat should have more reference to this fact, than to the color. When wooden outbuildings, fences, &c., are protected in this way, their durability is greatly increased, and an air of neatness and comfort, worthy of the farmer's attention, secured.

BUTTER MAKING.

The following comes to us from a lady, and we trust that "some practical dairy-woman" will furnish us with the information asked for, in season for our next number:

Messrs. Editors.—Having taken your paper since January last, I have read it with interest and profit, but have looked in vain for that in which I most needed instruction. Can you not induce some *practical* dairy-woman to give, in your next number, a minute description of the process of making butter in the best manner? Ask her to bear in mind, that a young woman brought up in a city, may possibly never have seen milk-pan, churn, nor butter-ladle, and to name the kind of pan, churn, etc., which she has proved best. By so doing, she will enlighten at least one inexperienced person, and perhaps benefit THE NEIGHBORS.

MAKING SOAP.

It is well known to many housekeepers, that failure often results in the manufacture of common soap, even after the ley is proved to be of sufficient strength, by means of the common family hydrometer, the egg. This failure is in consequence of the solution of the potash (or the ley) not being sufficiently *caustic*, which is caused by its combination with carbonic acid from the air while it existed in the form of ashes. This may be strikingly shown by its powerful effervescence when subjected to the action of one of the stronger acids. This difficulty may be easily removed by the use of lime, which has a stronger affinity than potash for carbonic acid, and which consequently abstracts it from the potash, leaving the latter nearly pure, and consequently in a caustic state. It is accomplished either by placing unslacked lime in the bottom of the leach, or subsequently in the tub of ley. J. J. T.

ITEMS IN DOMESTIC ECONOMY.

Use spirits of turpentine to remove grease spots from clothes. It dissolves the grease, and then soap the more easily removes it. Grease may be removed from undyed woolen by a solution of pearlash.

Lime spots on woolen clothes may be completely removed by strong vinegar. The vinegar effectually neutralizes the lime, but does not generally effect the color of the cloth. Dark cloth, the color of which has been completely destroyed in spots six inches square, has thus had its original color perfectly restored.

The whiteness of ivory handled knives may be restored by rubbing them with fine sand paper or emery.

The oftener carpets are shaken, the longer they last, as the particles of dirt and sand which collect upon them grind the threads. Sweeping them also wears them.

Dry wood will produce on a moderate estimate, twice as much heat as the same amount of green wood; and saves much trouble in kindling fires on cold mornings. To prevent its burning away too rapidly, the sticks should be large. To suppose that green wood will actually cause more heat in burning than dry, is as absurd as to suppose a vessel of hot water will freeze sooner than a cold one. J. J. T.

SODA FOR WASHING.

We have been requested by a correspondent, to publish the recipe for washing with sub-carbonate of soda.

To five gallons of water, add a pint and a half of soft soap, and two ounces soda. Put the clothes (after soaking over night,) into the mixture at boiling heat, rubbing the parts most soiled with soap. Boil them one hour—drain—rub, and rinse them in warm water; after being put into indigo water, they are fit for drying. Half the soap and more than half the labor is saved by washing in this manner.

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SILK WORM EGGS FOR SALE.

THE subscribers are enabled to offer the growers of silk a very good description of Silk Worm Egg, warranted in perfect order, and of the Italian Yellow and White Peanut variety, of which they have received about 30 oz., and which will be sold in quantity to suit, at $3,50 per oz. of about 50,000 eggs, on paper. Also, orders received for Reels from a sample that can be seen at their store, and which is on the Piedmont principle improved, and reels very rapidly and in the best way to make good silk; cost, from $5 to $7,50 each.

G. M. HAYWOOD & CO., 128 Pearl-street.
New-York, April 23, 1843.

WANTS A SITUATION.

A YOUNG MAN, lately from Scotland, wants a situation as land steward, either on an arable or stock farm. Has been regularly bred to agriculture in all its different branches; also the rearing and feeding of live stock, as is practiced in one of the best cultivated counties in Scotland; is willing to make himself generally useful to his employer; can produce unquestionable certificates as to abilities and moral character. Letters addressed to R. R., office of this paper, post paid, will be punctually attended to. April 28, 1843.

PERFECT HIVE.

INDIVIDUAL rights for constructing and using the above excellent hive, may be obtained of the subscriber, at Springfield, Mass., or of his agents in other places, for $3, forwarded by letter, postage paid, or otherwise. A deed of right and one hive will be forwarded to order, on receipt of $4, free of postage. Mr. Nicholas A. Vedder of Schenectady will dispose of rights and hives for Schenectady county; Mr. James Matthews of Troy for Rensselaer county, and Mr. J. C. Robinson, 57 Market-street, Albany, for Albany county. A model may be examined at the Cultivator office. EDWIN BOOTH.
Springfield, Mass., April 28, 1843.

TO FARMERS.

THE subscriber is prepared to supply Compound Guano, prepared from an analysis of that valuable manure. Also, dry Sulphate of Soda, Sulphate of Ammonia, &c. He has 5,000 to 10,000 bushels of Hard Wood Charcoal, which he will sell at 4 cents per bushel. Estimates will be given for any description of Chemical Manures that may be required. Engaged in chemical manufacturing for thirty years, he feels confident of giving satisfaction to those who may favor him with their orders. All letters asking information must be post paid.

JOHN BARLING, foot Jane-street, Greenwich.
New-York, April 28, 1843.—6t

CUMMINGTON SCYTHE STONES.

THE attention of farmers and all who use whetstones throughout the United States, is respectfully invited to an article now manufactured from the celebrated "Robbin's Ledge," by J. S. Stafford & Co., Cummington, Mass. The decided superiority of these stones is acknowledged by all who have given them a trial, and the eager demand for them from those sections of the country into which they have been introduced, is the best recommendation that can be given them. The public are requested to satisfy themselves in regard to the merits of the above article, by giving it a trial. For sale at the manufactory; also by *Wood & Folger*, 219 Pearl-street; *William H. Wight & Co.*, 100 John-street, and *Clark & Wilson*, 7 Platt-street, New-York—*Humphrey & Lansing*, and *Van Alstyne & Son*, Albany—*Kelloggs & Co.*, *Warren. Lesly & Hart*, Troy, N. Y., and will be furnished at the principal villages throughout the country.

Orders addressed to FRANCIS BATES, Agent, Cummington, Mass., will be punctually attended to. April 11, 1843.—3t

REPRINT OF CHAMBERS' EDINBURGH JOURNAL.

To be published at the Albion office, 3 Barclay-street, New-York

EXTRACT FROM THE PROSPECTUS.—It has long been a matter of surprise, that amidst the almost countless number of reprints of British works daily issuing from the American press, the above has not formed a part of them.

Chambers' Journal is conducted by William and Robert Chambers. It is extensively circulated throughout the British isles, and commands commendation and respect wherever it is known.

In order to put this work within the reach of all classes of the public, we have determined to issue it at the very low price of one dollar and a half per annum; and also to furnish it to agents at a discount from this price of thirty-three and a third per cent. And in order to disseminate the publication still more extensively, we have determined to give individuals or companies of individuals who may order five copies, the advantages possessed by agents, and to extend to them also the benefit of the discount. A remittance of five dollars, then, provided it be in funds at par in the city of New-York, or not more than five per cent discount, will command five annual copies to one address.

The publication is weekly, contains eight pages, and is printed in the quarto form, with neat type and on good paper. Our edition will be an exact transcript of the Edinburgh copy.

It is scarcely necessary to state, that the low price at which we offer the work, will oblige us to adhere to the cash system, without any deviation whatever.

Agents will please to send their orders forward as early as possible. We shall reprint from the first number of the present year, so as to make the volume complete.

WILLIAM LACY, Agent, Daily Adv. office, Albany.

TOWNLEY'S PATENT PREMIUM BEE HIVES.

INDIVIDUAL rights for constructing and using the above hives, may be obtained for five dollars cash, by addressing the subscriber. All letters to be post paid.

Also for sale, a Treatise on the Cultivation and Management of Honey Bees, by the subscriber, 75 Thompson st., New-York.
Feb. 7, 1843. EDWARD TOWNLEY.

AGENTS FOR THE CULTIVATOR,
IN THE PRINCIPAL CITIES.

Boston—Eben. Wight, Druggist, 46 Milk st.
Hovey & Co. Seedsmen, 7 Merchant's Row.
Providence—A. H. Stilwell, Bookseller
Hartford—E. W. Bull, Druggist.
New-Haven—George Sherman.
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THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

AGENCY FOR THE CULTIVATOR IN LONDON.—Orders and advertisements for "The Cultivator," are received in London, by P. L. SIMMONDS, Foreign Newspaper Agent, Agricultural Agency Office, 18 Cornhill, opposite the Royal Exchange.

MONTHLY NOTICES.

Communications have been received since our last, from Martha, Geo. Allen, (sent to T. B. W.) J. N. Smith, A. R. M'Cord, Geo. Woodfin, Geo. F. Baltzell, J. G. Wheeler, W. H. Sotham, L. F. Allen, Isaaac Hinckley, V., T. R. Hussey, A. R. D., G. Butler, David Palmer, E. Hubbard, S. B., Wm. Cline, J. R. Speed, R. L. Pell, M. R. H. Garnett, T. M. Niven, Connecticut Boy, S. E. Todd, A. S., A. Petrie, A Friend to Real Improvement, J. M. Johnson.

☞ Mr. NIVEN's description and drawing of his Filtering Cistern, shall have a place in our next. We shall be greatly obliged if Mr. N. will favor us with a description and the necessary drawings of the dog power churns used in Orange county.

☞ The letter of L. F. ALLEN, Esq., to the Recording Secretary of the State Ag. Society, was forwarded to the Committee having the matters to which it referred in charge.

☞ The communication of J. R. SPEED, Esq. with the accompanying engraving, shall have a place in our next, it having come too late for a suitable place in this number. We hope to see the animal itself at the State Fair at Rochester.

☞ We are indebted to GEO. F. BALTZELL, Esq., Apalachicola, Florida, for a quantity of melon seeds, of varities which have proved very superior in that vicinity. "Watermelons of this kind," he says, "have been raised, weighing 60 lbs., and are peculiarly sweet and mellow to the taste." We shall give them a fair trial, and report on their merits in this climate. Also to D. A. BULKLEY, for seeds of a large pumpkin, grown in Illinois the last season, which weighed 166 lbs.

☞ The *Bassano Beet*, mentioned in our April no., was introduced into this country, by M. B. BATEHAM, Esq. Editor of the New Genesee Farmer, to whom we are under obligations for a paper of the seed.

P. F. W., Columbia, Pa.—The no. requested was duly forwarded. Please "write," and we will pay the postage.

J. G. W.—The price of Hussey's Corn and Cob Crusher, is $35—of Baldwin's, $65. For descriptions of both these machines, see Cultivator for Jan., p. 19. They would not, we imagine, answer to grind plaster.

COLMAN'S TOUR.—We shall be happy to receive subscriptions for this work. It will be published in Boston, by A. D. PHELPS, Mr. C.'s agent, to whom any communications for Mr. Colman, may be addressed during his absence.

COVERING SEEDS WITH STRAW, LEAVES, &c.—Extrat of a letter from S. WELLER, Esq., Brinkleyville, N. C., to the Editors of the Cultivator:—"I have just learned from a most respectable source, that my system of surface covering of small grain, with pine straw and other litter, to insure a good crop, with the additional one of clover, on ground that would otherwise probably fail, is practiced with the happiest results, by some of the best farmers in the state of Virginia; and that one in particular, accounted second to none in agricultural improvement and skill in farming, covers his small grain often a foot thick with straw or other litter, and finds himself most amply compensated in yield of crops and improvement of land, for his trouble in so doing."

SPECIMENS OF WOOL.—We have received from M. R. COCKRELL, Esq. near Nashville, Tenn., some specimens of wool from his flock of Saxony sheep, of a very fine quality. Also specimens from his long-wooled sheep, which we think it would be difficult for our northern flock masters to match. [T. D. will write to Mr. C.]

☞ The editor of the *American Farmer*, is mistaken in supposing that the Legislature of this state have withdrawn their aid to the New-York State or County Ag. Societies. The appropriation was originally for five years, but two of which have passed. The bill introduced at the late session of the Legislature, was intended to make the appropriation *permanent;* but this was not deemed necessary at this early day.

☞ The seventh number of CAREY & HART's edition of the *Farmer's Encyclopedia*, has been received. It is accompanied by a handsome plate of the principal Seed Drills used in England. Will the publishers please send us the 6th no. which has not come to hand?

THE NORTHERN LIGHT.—This valuable work has just entered its third vol. under the principal editorial direction of A. B. STREET, Esq., a gentleman eminently qualified for the duty. The first number of the new vol. is one of unusual interest. It contains original papers from Dr. T. R. Beck, C. N. Bement, Dr. E. B. O'Calligan, Messrs. A. B. Street, S. S. Randall, E. G. Squier, the late Cicero Loveridge, and others. It is printed in the same form any style as the Cultivator, and at the same price. Address "Editors of the Northern Light, Albany."

The April no. of the "Medico-Chirurgical Review, and Journal of Practical Medicine," published in London, has been promptly issued by R. & G. S. Wood, New-York, by whom it is regularly re-published, at $5,00 per annum.

BLACKWOOD'S MAGAZINE.—We are indebted to the publishers of the "New World," for their cheap re-print of this well known monthly. Having received a copy of the May no. in advance of its publication at home, by the Great Western, it was issued in New-York only fifteen days after its publication in London. The leading article in the April no. is an able review of the first vol. of Stephen's "Book of the Farm," now publishing in Edinburgh, in monthly parts. This re-print of the Magazine entire, is afforded at the low price of $2,00 a year, making it, as the publishers truly say, "the cheapest magazine in the world."

"*The True Genesee Farmer*" has been discontinued, and its subscription transferred to the "*New Genesee Farmer*," which has been reduced in size and price one-half. M. B. BATEHAM, Esq., succeeds Mr. Colman as editor.

☞ THE notice of the Farmer's Club of Wilmington, in the Cultivator for May, should have been credited to the Delaware *Republican*, instead of Gazette.

THE CUT WORM.—The Germantown Telegraph states that Mr. Isaac Newton of Delaware co., Pa., has discovered what is considered a certain remedy for the ravages of the cut worm. He has tried it several seasons, and in all cases with entire success. It is simply by mixing fine salt with plaster, in the proportion of one quart of salt to four quarts of plaster, and applying it to the corn after it has come up. Care must be taken not to sprinkle the plant itself with the mixture.

YOUNG MEN.—One of the most favorable "signs of the times" is to be found in the desire which is beginning to be manifested by many young men of education and wealth, to engage in agricultural pursuits instead of pressing into the already overfilled ranks of the mercantile and "learned" professions. The following extract is from a letter of a New-York merchant, who had applied to us to aid him in finding a place for his two sons with an intelligent practical farmer, where they could qualify themselves to manage a farm to advantage. He says, and truly, that "it is desirable for the public good and for the progress of agricultural science, that young men of education and respectability should, in place of crowding into large cities to live under constant excitement, and to waste their lives in dreams of affluence, devote themselves to agriculture, the noblest of all occupations—in pursuing which they may live in tranquil enjoyment—cultivating the intellectual and immortal spirit. This would raise up a class of well-informed farmers—the true nobility of the country."

FARNHAM'S TOUR ACROSS THE ROCKY MOUNTAINS.—This publication, from the press of the Tribune, is one of the most interesting books of the season. We allude to it again, for the purpose of giving the following, as showing in connection with preceding passages, the immense numbers of buffalo that still exist on the plains of the west. The scene was on the Arkansas river, a little below where it escapes from the mountains: "The buffalo during the last three days had covered the whole country so completely, that it oftentimes appeared extremely dangerous, even for the immense cavalcade of the Santa Fe traders, to attempt to break its way through them. We travelled at the rate of fifteen miles a day. The length of sight on either side of the trail fifteen miles; on both sides thirty miles: thus a space of some forty-five miles in length by thirty in breadth, or 1,350 square miles of country, was so thickly covered with these noble animals, that when viewed from a height, it scarcely afforded a sight of a square league of its surface. What a quantity of food for the sustenance of the Indian, and the white pilgrim of these plains!" Some butchers were present in the caravan, and they agreed, "that many of the large bulls would weigh 3,000 pounds and upwards; and that as a general rule, the buffalo were much larger and heavier than the domesticated cattle of the States."

MILK AND RAILROADS.

THERE is scarcely an article that can be named so essential to the health and comfort of families as milk, and it is believed there is no one in which more gross impositions have in many cases been practiced on the consumer. The account given by Mr. Colman of the milk used in New-York, cannot be pronounced an exaggeration; and we know no good reason why that account should be applicable to that city alone. But a brighter day is dawning on the dwellers in cities, so far as milk is concerned; and the venders of swill slop, cold water, and artificial milks, are finding their occupations seriously endangered. This is being brought about in a great degree by the influence of railroads, which, spreading a network over the country, and centering in the cities, bring the farmer or dairyman residing 50 miles from the city within a few hours ride, and enable him to offer his products in the best possible condition for competition. This effect was first extensively felt in Boston, in the reduction of the price and bettering the quality of milk, though that city had never been condemned to use such scandalous stuff as was sold in some other places for milk. At the present time a large portion of the milk used in that city is received by the railroad from country dairies. The same beneficial results are beginning to be felt in New-York, much to the annoyance, as we gather from the newspapers, of the amateurs of artificial milk in the metropolis. By the New-York and Erie railroad the milk of the cows fed on the sweet pastures of Orange, and the rich dairies of Ulster, are brought within four or five hours of New-York, and the milk business is becoming extensive and profitable. As was expected, a spirit of rivalry has been called out among the old milkmen against their new competitors, and some insinuated that the Orange milk could not be kept sweet so long, unless some deleterious chemical preparation was added. The following account given by an Orange Co. farmer, of the manner in which their milk is sent to market, satisfactorily accounts for its keeping so well, since pure milk, quickly cooled and kept at a low temperature, will be sweet for a long time, even in warm weather:

The cows are milked early in the morning at Goshen and its vicinity, the milk put into cans containing from 60 to 75 quarts, into which a tin tube filled with ice is inserted, and stirred until the animal heat is expelled from the milk. It is then sent by the railroad, and arrives, a distance of 80 miles, at the milk depots (which are numerous in the city,) in four and a half hours. The tube filled with ice is again inserted, and the milk thus kept cool and sweet until sold. It can be afforded to the public at four cents per quart, of which the farmer gets two cents per quart and is well satisfied, as it yields more than butter at 25 cents per pound.

When we recollect the vast influence which this method of supplying milk to cities has on their health and expenditures, and the advantages it affords farmers of an easy and profitable mode of disposing of this part of their produce, the mutual benefits of quick and certain modes of communication between the city and country become strikingly apparent.

SUBSOIL PLOWING.

We have had several inquiries as to subsoil plows, the method of using them, and the advantages resulting from their employment, and we propose to throw into one article, the answer to these several topics.

There are few things in the march of agricultural improvement, that have within the last few years excited more attention than that method of ameliorating the soil called subsoil plowing. It is well known to the farmer, that in ordinary cases the soil, or that part of the earth from which the vegetable derives its nourishment, does not extend in depth beyond the point penetrated by the plow, and this, being but a few inches, does not afford sufficient range for the roots, and is soon exhausted of its fertilizing properties. Where it is thus shallow, the soil, and consequently the plants, are more liable to suffer from drouth, or from excess of surface water, than where the roots have more room to penetrate, or where greater facilities are afforded for the discharge of water. It is to give a better seed bed, provide a more extensive range for the roots of the cultivated plants, and guard against excessive drouth or moisture, that subsoil plowing has been introduced.

As it is requisite the subsoil plow should penetrate to a much greater depth than the common plow, and into earth that had not before been stirred, it is evident a powerful implement and a strong team would be required. This would be the more necessary, if it was intended to bring this subsoil earth to the surface, by reversing the order of position, as is done when the surface is turned over by the common plow. But it is not intended or desired to bring this newly stirred earth to the surface; the subsoil plow is used only to break up this dense compact earth, and render it porous and permeable, while its comparative position remains unchanged. Still the subsoil plow must be heavy, strong, and of the best materials and workmanship, or they will fail under the hard trials to which they must be exposed. The first English subsoil plows were, however, much heavier, and consequently more clumsy and unwieldy than experience has proved to be necessary; and though those at present used there, are lighter and better than formerly, those imported have been found heavier than was required for the generality of our soils, and those that have been manufactured in this country, have been of a still lighter and more portable cast. At first not less than six horses were deemed necessary to work the subsoil plow, and frequently eight were used; now four are considered sufficient for all ordinary soils, and three good horses will subsoil to the depth of 18 inches any soil of the less dense and tenacious kind. The worst soils, or those that require the most force, are clays in which pebbles are imbedded, or the common hardpan of farmers; and next to this is pure clay, which is always difficult to move.

In using the subsoil plow, experience has shown that the best method, the one which is the easiest for the team, and which moves and breaks up the soil the deepest and most effectually, is to precede it with a common plow, which will invert the sod or surface to the depth of six or seven inches. In the furrow made by this plow, and following it, the subsoil plow passes, penetrating the earth to the depth of from twelve to fourteen inches, and breaking up or crumbling the earth to that depth. A new furrow slice is by the common plow turned on the work done by the subsoil one, and this process is followed until the field is finished. It is always better to use a team sufficiently strong to do this work easily, than from the want of power, to compel the animals used to a constant severe exertion of their strength.

On the first introduction of the subsoil plow, it was supposed that it would prevent the necessity for draining soils; but experience showed that in many cases, and particularly on retentive clay ones, lying level, and having but an imperfect natural drainage, the subsoil plow aggravated the evil it was in part intended to remove. It was found that on such soils, the water falling upon the surface did not flow off as readily as before; the broken up earth retained it in greater quantities, and to greater depths, and the further operations of plowing and tilling converted it into a quagmire or rather mortar bed of the worst kind. On all retentive soils, it has therefore come to be considered a settled point in husbandry, that draining should precede subsoil plowing, if it is expected to derive the greatest advantages from its use. It is not necessary that the drains should be as numerous as where this mode of plowing is not adopted, but should be so arranged as to accommodate the natural flow of the water, and of a depth sufficient to preserve their coverings from the action of the plow. With drains thus arranged, the water which sinks into the soil broken up by the subsoil plow, is not retained, but passes off readily, giving a dry, and consequently warm and friable soil to the depth penetrated by the implement. It is well known that the value of a soil can usually be determined by its depth. Subsoil plowing by rendering it accessible to the ameliorating influences of the air, and by permitting the descent of surface manures for incorporation with the before sterile earth, secures the depth so desirable for the perfect cultivation of plants. Many years ago, before the subsoil plow was invented, Judge Powell of Pennsylvania, said that by increasing the depth to which the plow penetrated, at each course of rotation in culture, he had brought some lands naturally shallow, to have a depth of excellent soil of fourteen inches. Wheat rarely or never freezes out of soils so well drained, and so friable as to allow the roots to penetrate freely to this depth, and the drain and the deep plowing combined, have much lessened this to the English as well as American wheat grower, the worst difficulty they have to encounter.

In almost every instance where we have known subsoil plowing tried in this country, it has been highly successful, and where it has partially failed, it may, we think, be mostly attributed to the cause we have mentioned—not attending to a proper drainage of the ground. In the country generally, we can hardly expect farmers to adopt methods of farming which will add materially to the cost of production: distance from market and cheapness of land combine to prevent this; but in the neighborhood of cities, or the vicinity of good markets, where it is desirable to give the soil its greatest degree of productiveness, without regard to the expense, the subsoil plow will be found an important auxiliary. That its use will continue to spread as its merits become known, is scarcely to be questioned, and on the best cultivated farms of the interior, the subsoil plow is now frequently met with.

Subsoil plows of excellent workmanship, and constructed on the most approved principles, are made in great numbers by the firms of Ruggles, Nourse & Co., Worcester, Mass., and Prouty & Mears, Boston. They are to be found at most of the Agricultural implement and seed stores of the country, and deserve the attention of farmers generally.

FEEDING HORSES.

Various opinions are entertained as to the best and most economical mode of feeding horses, and many experiments are on record that have been instituted to settle the question. The result seems to be, that at the ordinary prices of grain and hay, it is cheaper to keep horses on grain, than on hay, or on hay and grain. There is another important matter to be considered, however, and that is, is feeding entirely with grain, as conducive to the health of the animal, as a mixture of hay and grain. We do not believe it to be; and the general result of the experiments has been to show that it is not. Our own experience too would lead us to speak decidedly upon this point. We have tried feeding horses upon grain alone, and upon grain and hay, and found the latter the best for the animals. They were not so shrunk up or gaunt, there was more muscle and consequently more weight, and whatever may be thought of this latter quality in a race horse, where nothing but sinews and bones are required, every farmer knows that the road or farm horse is worth but little without weight. Feeding horses on grain alone, is like keeping a man on wheat bread solely; he will live for a time, but will finally sink under the experiment. In this case, the finer the flour the worse for the man. We have never had horses in better condition for labor, than when we have fed them with cut wheat straw, wet up in a tub with Indian corn meal. It is evident there must be some proportion between the bulk and the nutritive power of food, and grain alone gives too much nutritive matter for the bulk. Oats, perhaps, approach nearer the standard than any other grain; but the use of these alone, will in a long run be found unadvisable.

One of the most carefully conducted experiments we have noticed, was the one made by Mr. Brotherton, near Liverpool; and he came to the conclusion that horses cannot be kept in a condition fit for work, if fed on grain alone. For nine years, Mr. Brotherton allowed eight horses, three Winchester bushels of oats and one of beans, but no hay or chaff. During this period he annually lost more or less horses, which he attributed to the quantity of grain being greater than the stomach could digest. This induced him to adopt feeding hay with his grain in the following proportion:—To eight horses he allowed one bushel of oats, one bushel of beans, and three bushels of cut hay, straw or clover; and he found them better able to do their work than before, and for several years after adopting the plan, lost but one horse from disease. Farmers, we are confident, have much to learn on the subject of feeding animals, and the health and good condition of the latter will, we doubt not, be found compatible with greater degrees of economy than has generally been practiced.

LETTER FROM FLORIDA.

Extract of a letter from Geo. F. Baltzell, Esq. to the Editors of the Cultivator, dated Apalachicola, April 18, 1843:

"A few days since, I visited an old friend who has located in the vicinity of my residence, for the purpose of gaining the advantages of a limited dairy, and raising vegetables for the market. The mildness of the climate, and the abundant and rich natural meadow on the low piney wastes, render it unnecessary for the farmer to house his provender or deal out scanty supplies daily; neither are expensive houses for the accommodation of the cows required. His labors are mainly directed to the culture of potatoes, melons, cucumbers, peas, beans, etc. My attention was arrested by some new things, which, however, may be familiar to you. Among others, a cabbage, the growth of two years, of the common variety, standing some six feet high, maturing its seed, between the leaves of which a wren had formed her nest. The date, pecan and tamarind, were growing finely, with little prospect, however, of arriving at maturity. He had found in the neighboring forest, an apple tree five or six years old, from which he cut branches apparently of two years growth, stuck them down equi-distant from each other, without any preparation of soil or extraordinary care, and in a short time they put forth their foilage without a single failure. He showed me a peach tree that appeared to be of four years growth, with peaches of this season as large as a nutmeg, which he had transplanted without interrupting the growth of the tree or its fruit.

"In consequence of the spring being cold and wet, the planters have been retarded in their operations at least a month, and many have just planted. Should an early frost ensue, the coming crop of the staple will be very limited. The low price of cotton and the scarcity of money, compels the planter to turn his attention to his farm, and endeavor to make upon it that which a few years since was purchased from his neighbor. They are generally men of intelligence and will seek for the best information. Heretofore no attention has been paid to manures, rotation of crops, or to any of the various improvements, old or new; the planter looking solely to the result, without regard to the husbanding his resources of any kind. The system adopted tended to impoverish and render waste the land, while it should have been his pride to cultivate, embellish and improve."

SIR JOHN SINCLAIR'S OPINION ON CATTLE.

The late Sir John Sinclair, it is well known, was one of the most distinguished Agriculturists of Europe, and few men's opinions can be entitled to more respect or confidence. We recently found in an old Quebec paper, a letter from him, in answer to some inquiries made by the Lower Canada Agricultural Society, on the subject of cattle. We have thought that a condensed view of his replies to the several questions might interest the readers of the Cultivator.

Query 1. "What in your opinion is the most celebrated bered of milch cows in Great Britain?"

To this Sir John answers, that "the improved dairy cows in the western counties of Scotland are the most celebrated and valuable breed of milch cows in Great Britain or any other part of Europe." ****** "The Durham or Teeswater breed, are superior as dairy cows to any other breed in England, and if they were as well fed and treated as the Scots dairy stock, would equal them in beauty and good qualities." He thinks the excellence of the Dutch cows is more depending on the richness of their pastures than on the breed, and says they have strong bones, coarse shapes, and do not yield so much milk in proportion to the size as the dairy cows in the west of Scotland.

Query 2. "What quantity of milk will a cow of such a breed give per day?"

To this query Sir John, after giving some of the causes which will make cows of the same breed give different quantities of milk, says:—"But without going into particulars, or mentioning extraordinary returns that some cows have made, it may be stated with entire confidence, that the fair average annual returns of milk given by thousands of the best Ayrshire dairy cows, when they are in good condition and well fed, and when they drop their calves about the end of the month of April, will be nearly as under:

First	50	days,	24	quarts	per day,	1200
Second	50	"	20	"	"	1000
Third	50	"	14	"	"	700
Fourth	50	"	8	"	"	400
Fifth	50	"	8	"	"	400
Sixth	50	"	6	"	"	300
						4000

It is equally certain that 14 or 15 quarts of that milk will generally yield 22 or 23 ounces of butter; and that from 110 to 120 quarts of that milk with its cream will yield 24 lbs. of full milk cheese."

Query 3. "What would be the price of a cow of such a breed, from two to three years old, and in calf?"

In answer Sir John states that the price of cows is very much depending on circumstances, such as scarcity of fodder, dry summer, time of the year, &c. Thus cows are 20 or 30 per cent. cheaper in Autumn than in May or June. "Some milch cows of the best sort and in good condition, have been sold as high as £25; but young cows, from two to three years old, and in calf, may be procured of the best sort at from £10 to £12 each, or still cheaper."

Query 4. "What would be the price of a bull of the same breed from 18 months to two years old?"

Sir John thinks no bull should be selected under two years old, as calves frequently alter their character and shape much in coming to maturity, and of consequence it is impossible to tell what a bull will be under the age of two years. "The dairy bulls that have most of the feminine aspect, are preferred to those who are more masculine. A dairy bull of good shape and qualities may be procured for about £14 or £15."

Query 5. "What is the most celebrated breed of cows in Great Britain or elsewhere for the production of butter?"

"The quantity of butter yielded by cows, depends more on the food given them than on any peculiarity of the breed of cattle; and the quality of the butter is greatly influenced by the manner of feeding, and still more so, by the manner in which the butter is manufactured." Cows fed on clean sweet pastures, give more and richer milk, and make sweeter butter than those fed on roots, cabbages, &c. The Dutch butter is justly celebrated, but this, according to Sir John, is not owing to the breed of cows, but to the richness and sweetness of their pastures; and above all things to the great attention paid to cleanliness in every department of the Holland dairies, is the excellence of their butter to be ascribed.

Query 6. "What quantity of butter would a cow of such breed produce per week?"

In answering this query, Sir John gives some examples of celebrated cows, among which is the "Crams" cow, the yield of which, as compared with some American cows, is given at page 150 of the 7th vol. of the Cultivator. None of the instances given of great products of butter, are equal to many that may be selected from the agricultural reports and papers of this country; 19 lbs. per week being the highest mark reached by him.

From these statements of Sir John, it is clear we have in this country the materials of as good dairies as are to be found in the world; cows of as good breeds, which will yield as much and as rich milk, and that nothing but skill and care in the dairymen is wanting to produce articles equal to those of any part of the globe.

DEATH OF THE HON. JAMES M. GARNETT.

It was with sentiments of profound regret, that we saw in the Richmond and other Virginia journals, the announcement of the death of this eminent man; regret that the State of which he was one of her noblest sons, should lose his services; regret that agriculture, to the advancement of which he was so ardently devoted, should be deprived of his powerful example and aid; and regret that the pages of the Cultivator, which he has so long made the medium of his communication with the public, must henceforth want those papers of his which never failed to interest and instruct. Mr. Garnett was a farmer from choice, because he loved the occupation, and saw in that and in its results the true source of continued prosperity to the nation. From his professional and civil engagements, he turned with delight to agriculture; his circumstances co-operated with his inclination, and enabled him to devote more time to the pursuit, than usually falls to the lot of such men. With a mere theoretical knowledge of the details of farming he was never content; but he carried into practice those rules which carefully conducted experiments, made under his own eye, proved best adapted to advance the interests of the planter and farmer. Through his exertions the Fredericksburg Agricultural Society was early instituted, and for more than twenty years he remained at its head, its ever zealous and efficient president. The influence of that society on the agriculture of that region, and the benefit of its example in the formation of kindred societies, will with difficulty be estimated. A collection of the addresses which he delivered before the annual meetings of the society, would form an interesting record of the progress of agriculture, of facts and experiments, for in these addresses he made a point of detailing the results of his experience during the year that had passed. Other districts and States were anxious to avail themselves of his instructive efforts, and like our own Judge Buel, whom in many respects he greatly resembled, he was frequently called to deliver addresses, or aid in the formation of societies at places remote from his home. When the National Agricultural Society was instituted, Mr. Garnett was called to the honorable and responsible situation of president, an office he filled at the time of his death. To the welfare of that society, and the promotion of its objects, his time and efforts were unceasingly devoted. The Cultivator was the favorite agricultural journal of Judge Garnett, and through its columns most of his valuable communications have been made to the public. A reference to the past volumes will show the extent of his labors in this field, and their value. We may now state that the series of papers signed 'Commentator,' so long continued, so ably written, embracing so many topics, and always so interesting, were from his pen. If we have spoken of Judge Garnett principally as an agriculturist, it is because the topic was most suitable for this place, not because we were insensible to his moral and intellectual worth, to his influence as a citizen, a statesman, and a man.

PROSPECTS OF THE COMING WHEAT CROP, &c.

In some remarks on this subject in our last number, the opinion was expressed that damage would be found to have been sustained by the wheat crop, from the depth and weight of the snow, but to what extent, it was then too early to determine. Since then we have received notices from all parts of the country, and we are sorry to say that a comparison of these reports renders it very certain that the loss sustained, on the whole, will be greater than was at first apprehended. From Ohio we learn that in the south part of the State, or on the river slope, appearances are very unfavorable; while in the lake counties, on the contrary, the fields exhibited a good set of plants generally, and the prospect was encouraging. In western New-York many fields have been plowed up, and from many others a slender crop must be expected. Since the ground was cleared of snow, we have had no frosts to injure the plants in the least, and the deficiencies must be attributed to the effects of the snow.

Notwithstanding the lateness of the season at which farmers were able to commence their spring seeding, such has been the fineness of the weather, that farmers found their work at the middle of the past month fully as advanced as usual, and appearances, if good getting in may be considered an indication, are fair for favorable crops.

Fruits of all kinds promise abundantly; but unless speedy measures are taken to check the ravages of the caterpillar, which was so destructive last year, and has already appeared in immense numbers, apples will be seriously injured. Instead of adopting any of the roundabout methods of destroying this caterpillar, let the orchardist do as did a farmer of our acquaintance last year, and we will guarantee them an exemption from this scourge. Mounted on his ladder, at the first appearance of the enemy, he visited each nest or web, and with his hands effectually crushed every one of their inhabitants at a grasp. The consequence was, that while his neighbors' orchards looked as though a fire had passed over them, destitute of both foliage and fruit, his was loaded with both. The caterpillar in the orchard, like the thistle in the field, is one of those evils much more readily corrected if attacked in the outset, than when it has been allowed time to establish itself; and the destruction of them the present year, usually secures an exemption for the next.

CONSUMPTION OF FOOD IN CITIES.

Few men who have not directed their attention to topics of that nature, can readily conceive the amount of food consumed in large cities, and the consequent demand they create for agricultural products. Smithfield is the great cattle market of London, and the record there shows the number sold in any given year. Thus in the five years from 1730 to 1735, the number of cattle sold was 93,655; and of sheep 568,060; or about 20,000 of the first and 100,000 of the last annually. In 1840 the consumption had increased to 190,300 cattle, and 1,500,250 sheep. The same year the number of bushels of barley, or rather malt, used for brewing, was 5,800,000; and it required 4,850,000 bushels of wheat and 620,000 barrels of flour to supply the city with bread. Paris, in proportion to its population, uses less meat and more bread than London. Americans are famed for their use of meat; and the following table, apparently compiled with considerable care for the True Sun, will show the value of the agricultural products codsumed annually in New-York city.

Fresh beef,	$1,470,000
" veal,	350,000
" mutton,	300,000
" pork,	600,000
" poultry, game, eggs,	800,000
Salted beef, pork, hams, &c.,	1,200,000
Vegetables and fruit,	1,200,000
Milk,	730,000
Butter, cheese, and lard,	1,500,000
Flour, meal, and other bread stuffs,	3,000,000
Hay and oats,	750,000
Fuel (wood and coal) exclusive of steamboat fuel,	2,500,000
Other articles, exclusive of building materials,	500,000
	$14,900,000

THINGS TO BE REMEMBERED.

Horses should never be put to severe work on a full stomach. More horses are hurt by hard driving after a full feed, than by a full feed after hard driving.

If the farmer wishes to have his pork barrel and meal chest hold out, let him look well to his kitchen garden. Plenty of vegetables conduce not more to health than to profit.

In laying in a stock of winter fodder for animals, let it not be forgotten that a little too much is just enough. Starving animals at any time is miserable policy.

As you treat your land so it will treat you. Feed it with manures liberally, and it will yield you bread bountifully.

Avoid debt as you would the leprosy. If you are ever tempted to purchase on credit, put it off for three days. You need time for reflection.

Never beg fruit, or anything else you can produce by the expenditure of a little time or labor. It is as reasonable to expect a man to give away the products of his wheat field, as of his orchard or fruit garden.

If you keep your sheep and cattle in your meadows until June, don't complain next winter because you are compelled to purchase hay for your stock.

The man who uses good seed, has a good soil, and works it in good season, rarely fails of having a good crop to reward his toil.

Never forfeit your word. The saying in truth, of any farmer, "his word is as good as his bond," is worth more to him than the interest of $10,000 annually.

CATTLE AND SHEEP OF GREAT BRITAIN.

We find the following in a late English journal, and give it for the purpose of comparing it with some of our own statistics and prices:

"The total number of horned cattle in the United Kingdom, is estimated at 7,000,000, and the total number of sheep at 32,000,000. Valuing the first, per head, at £10, and the last at 25s., both together will give a total value of £110,000,000."

In the U. States, according to the census of 1839, the number of horned cattle was 15,000,000, and the number of sheep 20,000,000. But the difference in the estimated value is the most striking point in the comparison. There, the average value is put at about $45 for the cattle, and about $6 for the sheep. Here, an average price of $12 for the cattle, and $1,50 for the sheep, must be considered a liberal estimate. This fact shows why the prices of meat are so high in Great Britain, and proves that we ought to be able to furnish them a supply of beef at remunerating prices. We think it clear that in the present position of trade, tariffs, and prices, a fair export trade in beef and pork to England, may be expected.

Answers to Inquiries, &c

CORN SUGAR—PALMA CHRISTI.

"Messrs. Gaylord & Tucker—I would be glad to see in your columns the process of grinding the corn stalk, expressing the juice, and boiling and graining the sugar. Also the modus operandi of husking or freeing from its hard envelope the seed of the palma christi, or castor oil plant. I have no doubt the experiments of Dr. Cloud will have a good influence on the culture of cotton. E. Taylor."

Mt. Jefferson, Ala. 1843."

This note was written previous to our April No. reaching Mr. T. In that he will find full directions for the making of sugar from corn. With the best processes of making oil from the palma christi we are unacquainted. In France, where oil of a superior quality is made, the fresh seeds are bruised and then put into a cold press; (some persons improperly heat the plates of the press.) The oil so extracted is allowed to stand some time to separate from its impurities, or is filtered. The produce in oil is about equal to one-third of the quantity of seeds. We should be pleased to receive from some of our Illinois friends engaged in the culture of the palma christi and the making of oil, a full account of the process.

SOUTH DOWN SHEEP.

R. Burr, Esq., of Rice Grove, Canada, asks for some information with regard to the South Downs, their habits, constitution, price, and where they can be obtained genuine; and also for directions for coloring the most common colors wanted by farmers, particularly red and yellow, for which see last page of this paper.

Experience with the South Down breed of sheep proves that they are a very valuable breed, well adapted to our country and climate, producing fine mutton, and if the wool is inferior to that of the Merino or Saxon, it is of a good quality, and is placed in fineness next to those we have named. It is a very hardy animal, thriving well on short, upland or hilly pastures, and fattening readily on turneps, or better pastures. Some of the finest mutton ever exhibited in this city was from the South Down flock of Mr. McIntyre. South Downs of pure blood may be obtained in the vicinity of this place, and selections made from several fine flocks; they may also be had of Mr. Rotch, Butternuts, Otsego co., who has some of the finest in the country; and doubtless from other breeders of this valuable animal. The prices will range from $15 to $25 depending on the kind and quality of the sheep.

BEST GUIDE TO FARMING.

"Messrs. Editors—Will you be kind enough to state in the next number of the Cultivator, what is the best and most practical work yet published on farming, and the best adapted to the wants of a young beginner.
"W. S. Chapman.

"*Cincinnati, Ohio.*"

One of the best works, in all respects, is the "British Husbandry," in 2 vols. octavo, published in London. Mr. Stephens' "Book of the Farm," now issuing at Edinburgh, in numbers, promises to be very useful. But we can recommend as the best, most practical, and therefore best adapted work on agriculture, to any beginner, the series of "The Cultivator;" and these will also be found cheaper than any other. The volumes of the Cultivator, nine of which have been completed, will be found to embrace the most full, minute, and comprehensive details in all the various departments of farming, and all the products of agriculture. As mere manuals for the beginner, the "Farmer's Companion," by the late Judge Buel, or the two volumes on "American Husbandry," from the press of the Harpers, are compilations of value.

SMALL STONES ON LAND.

"Messrs. Editors—I find I differ from some of my farming friends with regard to the propriety of entirely freeing the land we cultivate from all the stones, large and small, to be found upon it. I have an impression that too close a removal would be injurious rather than beneficial. Will you be so kind as to give us your opinion on the subject. A Young Farmer."

Something we think would be depending on the nature of the soil, and something perhaps on the kind of stones most common in the soil. On a very light gravelly or friable soil, it would be scarcely possible to separate the stones too closely; for greater compactness is what is wanted on such lands. On the contrary, if the soil is inclining to be cold and dense, a too close removal of the small stones would be decidedly injurious. These opinions do not rest on mere theory alone. Mr. Marshall, in his works on agriculture, mentions an instance in which a turnpike company, wishing to obtain a quantity of stone, purchased of a farmer, all that could be found to the depth of 18 inches in a certain field. The field abounded in fine stone, and the farmer congratulated himself on the final removal of this formidable obstruction to its culture. The whole earth, to the required depth, was passed through a sieve or riddle, which separated every thing larger than an ounce ball. The appearance of the field was greatly improved by the operation; but the farmer found that its capacity for cropping was almost destroyed, and would have been heartily glad to have returned the money received, could the stones removed been replaced. A friend has informed us of a somewhat similar instance in this state. A gentleman near the Cayuga bridge, had a field of ten acres of excelledt soil, producing fine crops of wheat, but rendered unsightly by the abundance of broken limestone, large and small, with which it was covered. To free it from this nuisance, as he considered it, he had all the large or suitable sized ones removed and made into walls, and those unfit for use removed, and used for filling up a swamp in another place. He is now convinced he erred greatly in removing them too closely; the land is more dense and compact, and in spite of the most careful cultivation, it does not produce wheat near as well as formerly, or as well as similar land from which the stones have not been removed. All stones have an influence more or less on the soil; and the limestone, in addition to the effects of common stone, is constantly undergoing a decomposition which exerts a powerful action in modifying the character of a soil.

THE CUT WORM.

Messrs. Gaylord & Tucker—You will greatly oblige subscribers to your paper on this Island, and doubtless many others in other parts of the country, by giving in your next number an effectual remedy for the grub worm. Last year it destroyed many crops of corn, and it has again made its appearance, promising to be as destructive as ever. If there is an effectual remedy, an immediate knowledge of it would be very desirable.

Staten Island, May, 1843. V.

There are two kinds of depredators known by the name of the grub worm; one the larvæ of the May beetle, which is white, with a red head, and is usually called the white grub. The other is the larvæ of a moth, is of a black color, and we presume is the one referred to by our correspondent. For the white grub we know no remedy that can be relied upon as effectual; for the black grub or cut worm we are aware of but one, and that may be found well described on page 206, of the fifth vol. of the Cultivator. That we consider infallible, having tested it frequently in the garden and the field. It consists in going over the garden or the field, and wherever a cut stalk shows his presence, hunting up the grub, and killing him at once. He is readily found, just under the surface, close by the spot where he has been feeding. It is true the remedy requires some time and patience; but you have the satisfaction of knowing that when you have cleared your field or garden effectually once, the work will not need repetition for several years.

ABORTION IN COWS.

We have, within a few months, heard many complaints from farmers on the subject of abortion, or the slinking of calves by the cow, and as the evil may be an increasing one, it may serve a good purpose to direct attention to the nature, causes, and prevention of the difficulty. Of all the domestic animals, the cow is most subject to abortion, and the loss of the calf may occur at any time between the third and the eighth month. In most cases there are some indications of the coming abortion; the cow is dull, off her feed, the milk dries up, the belly loses its rotundity, and the animal exhibits other symptoms of illness. One of the most unfailing indications is the issuing from the vagina of a yellowish or red glairy fluid, and this appearance usually immediately precedes abortion. Sometimes the labor is protracted and dangerous; at others it is attended with no alarming symptoms.

The causes of abortion are involved in much obscurity. It is more frequent in particular districts than in others; and in some seasons seems to assume the form of an epidemic. At such times all, or nearly all, the cows in a dairy will lose their calves, in spite of every effort to prevent it, and the loss from this cause is frequently a serious one. It sometimes appears in the herd of the breeder, and for a time subjects him to heavy losses. By some it is considered contagious; but the rapidity with which the tendency to abortion spreads in a dairy, can, we think, be explained on other grounds. Among all the cows of a dairy, or all those of the same farm, there must exist a tendency to the same diseases, as all are exposed to the same cause, whether that cause be to produce murrain, hoof-ail or abortion. Every dairyman is aware of the effect which the smelling of blood or other offensive matters will produce among cows, and to the sympathetic irritation which the smell of an aborted fœtus will occasion, may doubtless be traced the rapidity with which abortion will spread through a dairy of pregnant cows, when the calf of one is unfortunately lost. But this sympathetic irritation will hardly account for those cases that occur on farms, at considerable intervals of time, or where but few cows are kept.

Mr. Lindsay attributes abortion to the use of improper food, or a too small quantity; and gives several instances in which it arose from feeding cows with bad hay. In one of these cases a farmer had ten cows out of twenty-two, that lost their calves by abortion.

Chabert, a French veterinarian of great reputation, mentions a case in which abortion was prevalent on the farm of a dairyman for many years, in spite of every precaution and great expense, but who effectually checked the destructive habit, by changing his entire stock, at the suggestion of Mr. C.

Mr. White, an English veterinarian, says the most common cause of abortion is improper food in the winter and spring, added to the impure water which many herds are compelled to drink; and he mentions an instance in which the disease was eradicated from a farm on which it had been long prevalent and fatal, by the substitution of pure well water for that of the ponds from which the cows had before drank. Another cause, according to Mr. W., is a vitiated state of the digestive organs. A farmer at Charentin, near Paris, kept his cows during a very dry summer, in a wet meadow on the banks of the Seine, which frequently flooded it, and the cows were generally up to their knees in mud, feeding on the coarse grass, crowfoot, rushes, &c. As a natural consequence, out of twenty-eight cows, sixteen lost their calves at different periods of gestation. Mr. White is confident that keeping cows on food deficient in nutrition and difficult of digestion, is one of the principal causes that induce abortion.

M. Cruzel, in the French Vet. Journal, gives an account of several cases in which abortion could be clearly traced to high feeding. This high condition keeps them in a continual state of excitement; inflammation of the uterus frequently occurs under these circumstances, and abortion is the natural result. In one case, where M. Cruzel was called professionally, he could discover no cause for the abortions, other than the unnecessarily fine condition of the animals, and he attributed them at once to this cause. He ordered the quantity of their food to be reduced—he bled all the remaining cows—the farmer was careful that nutriment should not be so dangerously wasted, and abortion ceased on the farm. Mr. Wedge in his agricultural survey of Cheshire, remarks "that slinking occurs generally in wet seasons, or when the cattle are in a very high condition, and frequently continues for two or three years together."

Hoar frost, or allowing cows to feed on grass thickly covered with it, is considered by many as the cause of abortion. In Switzerland, the beginning of hoar frosts is the signal for the appearance of abortion. Coarse, rank herbage, or acrid plants, such as grow on low wet meadows, are also considered productive of abortion. We have named these various causes, to show that it is difficult if not impossible to fix on any definite one, and the probability that it may arise from numerous sources affecting the sympathies or the general health of the animal. We are inclined to the belief that it oftener arises from the smell of blood, or of offensive putrid matters, especially if such odors resemble those arising from abortion or a decomposing fœtus, than from any other cause. Dr. Rudge states that a dairyman of Arlingham kept twenty cows in an enclosure, close to which was a dog-kennel. In consequence, as was supposed of these cows frequently having horses killed and skinned before them, and the smell of the blood and other matters, eight lost their calves; the remainder were immediately removed to a distant pasture and did well.

Little can be done usually to prevent abortion. When symptoms of it are discovered, liberal bleeding may be considered as effectually to check the tendency as any other course. Where abortion of a cow takes place, especially among a herd of cows, the greatest care should be taken at once to separate her from the others, and if the parts of the cow are smeared with tar or other stinking oils, the effect will be good. The calf should be removed and buried where the cows will not approach, and every thing that can retain any of the peculiar effluvia, should be placed beyond the reach or contact of the other cows. Fumigations of the cow buildings by means of tar, sulphur, feathers, &c. &c. have been frequently resorted to, but the effect has not been so favorable as was anticipated. Indeed some have asserted that they have never known an instance where fumigation was attended with the slightest success. Change of location; a transfer to high and airy pastures; a suitable supply of good food and pure water; and the perfect removal of all irritating substances or smells, are the things most to be relied upon to break up this destructive tendency.

We have been the more induced to refer to this subject of abortion in cows, now, since in addition to the cases to which we alluded in the beginning of this paper, some have fallen under our notice in this immediate vicinity, which, from the circumstances of the case, invest the subject with an unusual degree of importance. Mr. Prentice of Mount Hope, near this city, well known as the owner of one of the finest herds of Short Horns in the United States, has within a few months lost several calves, and one from his celebrated cow Matilda, from abortion. As usual, this result has been attributed to various causes, but perhaps more to high feeding than any other, by those who are unacquainted with the facts of the case, which are these, and which we think will show the loss of the calves must be attributed to some other cause than high keeping.

In the winter of 1841–2, being short of hay, Mr. P. fed his stock more or less meal, till near spring, when oil cake becoming the cheapest, he substituted this for the meal; and this was continued through the spring; but in no case did any animal receive more than two quarts per day, and only a few of the largest cows and deepest milkers had that quantity. Since that time, they have had nothing but pasture, hay, and straw. His first calf lost, was from a cow imported in October, 1841. She was bulled in England, and should have calved in January, 1842, but lost her calf some six weeks previous to that time, as was supposed, from injuries on the voyage. Since that time several cases of abortion have taken place among his other cows, one at four months, one at five months, and Matilda at seven and a half months. The three last abortions, were heifers for the first time in calf; and neither of these three had tasted meal, grain or cake, since some time previous to their taking the bull; their keeping was ordinary pasture in the summer, and hay and straw in the winter, and their condition, though good, was by no means high. To what cause shall we attribute the appearance of abortion in this herd?—to the sympathetic influences described by Youatt, and alluded to above, or to some local cause, acting separately or conjointly with these influences? From what we know of the facts in the case, we believe that both sympathetic and local causes have been operative, if indeed the local cause is not purely sympathetic in its action.

Mr. Prentice uses annually large quantities of refuse bits of furs from the Albany manufactories, for enriching his grounds. This refuse matter is made into compost, large heaps of which may be seen at all times in his yards, and which during the process of decomposition, will at times emit a strong and offensive animal smell. This compost is spread over all his grounds, so that these pieces of decaying skins have been constantly within the smell of his cows while pasturing; and while undecomposed on his meadows, have doubtless been raked up with his hay.

Would not this continual putrid animal effluviæ, produce on cows the effect attributed by Youatt and others to the odor of the putrid fœtus; and by Dr. Rudge to the exhibition and smell of horse flesh and putrid matters at the dog-kennel? We think it would; and that safety for Mr. P. lies in removing his stock at once, so that the destructive habits they are forming may be at once broken up. The destruction of such a herd of Short Horns as Mr. Prentice, at so much expense, has got together, might be considered not more as an individual than a national calamity, and we trust that measures will be speedily taken to arrest successfully this tendency.

USE OF POUDRETTE.

The suggestion contained in the annexed extract of a letter from Long Island, respecting the application of poudrette to corn at the first and second hoeings, may be of service to many of our readers who are so situated as to enable them to obtain it with facility from New-York. It will be seen by reference to our advertisements, that it can now be procured without delay.

Extract of a letter to the editors, dated May 23:—"In relation to the use of poudrette, I desire to say, that several years experience has shown our Long Island farmers that it may be used to great advantage as a top-dressing for corn at the first and even at the second hoeing, if applied properly. At the rate of one gill to the hill, spread on broadcast before the cultivator is put in at the first or even at the second hoeing, has been found of great advantage, and it seems to me that it may be found exceedingly convenient this backward season to bring forward corn which needs encouragement. It has been found, in years past, on Long Island, very useful thus applied; and it seems now a proper time to call attention to the subject, that those, if any, who may desire to make the experiment, may have the opportunity."

Extract of a letter written by Timothy C. Smith, Esq., of Smithtown, L. I., dated April 25, 1843:—"In reply to your inquiry as to my use of poudrette, I can simply state that I have used it mainly for corn in the hill, at the rate of 20 bushels to the acre, and consider it peculiarly adapted to that crop, both in the economy of its application and in bringing the crop to maturity. I consider it superior to any manure I have ever used; answering the same purpose, and having the same desirable effect on all soils to which that crop is adapted."

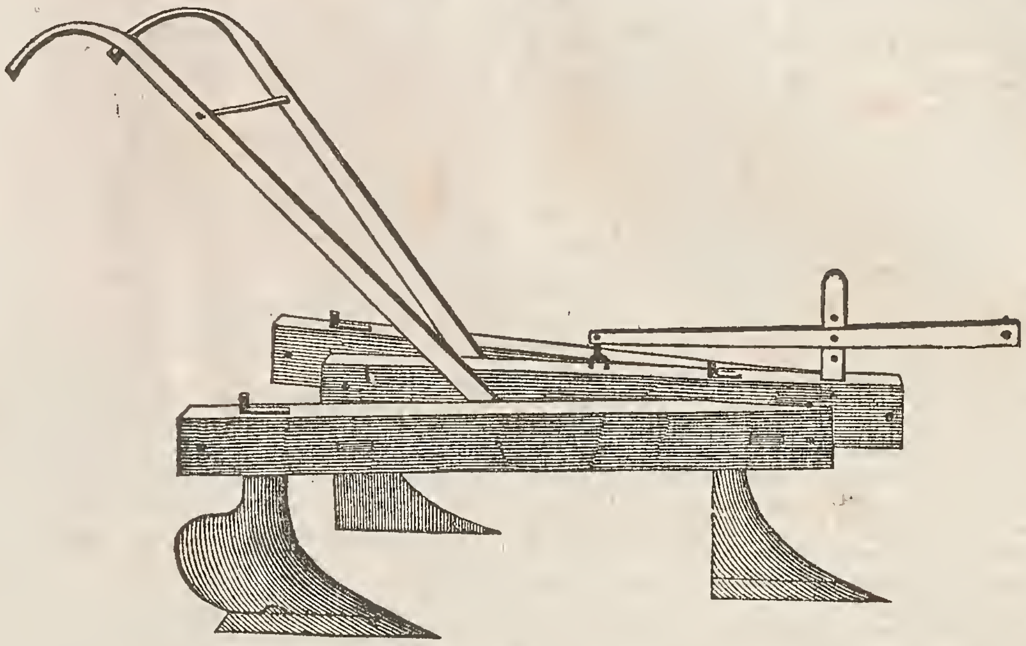
FOREIGN NOTICES.

The White Carrot.—Though this carrot has been common in Flanders and Germany for two centuries, it was not introduced into England till within the last four years. It is highly prized, and its cultivation is rapidly extending. It has been stated to give 30 tons to the acre, each ton selling in some neighborhoods at about $9,00, or double the value of Swedish turneps.

Globe Mangold Wurtzel.—Mr. Pusey states that the cultivation of this variety of beet is increasing; and that at Woburn, he was assured by the Duke of Bedford's bailiff, that by his highest farming he could grow 22 tons of Swedes, 30 tons of turneps, 36 tons of long mangold, and no less than 40 tons of globe mangold.

Worse than fatting Hogs on Mutton.—Mr. Hume, member of Parliament, is said to have stated at a late meeting of the Anti-Corn law league, that Mr. Everett, our Minister at St. James, had asserted at a public meeting in September last, "that bacon, which would bring 6d. per lb. (12 cents,) in England, was *actually used as fuel for steamboats in the United States, having no other way of getting rid of the superfluity!*"

Short Horns and Ayrshires.—In an article on the "Progress of Agricultural knowledge during the last four years," by Mr. Pusey, ex-president of the Royal Ag. Society, "it is said, indeed, that better milkers may be found than even the Short Horns; and this may be the case; but milk alone cannot be made the test of cattle even for a dairy farm, because the cows which are necessarily discarded each year, for age or barrenness, ought to be suited for fatting. In cattle, too, a Scotch breed, the Ayrshire, may stand by the side of our own, as it appears to unite in a high degree the two requisites of milking and grazing, both upon moderate land; but whether it be suited to our rich southern meadows must be doubtful."



WOOD'S PATENT PLOW CULTIVATOR.—(Fig. 44.)

THE above is a figure of Wood's Patent Plow Cultivator, which we are assured "has been thoroughly tried, and been found to give better satisfaction than any Corn Cultivator" previously used. It is manufactured by R. B. DOXTATER, Adams, Jeff. co., N. Y., and may be obtained in this city at the seedstore of Wm. Thorburn—of Starbuck & Sons, Troy, E. Gifford, Hudson—Freeborn & Co., Ag. Warerooms, 183 Front st., New-York, and also at Utica, Little Falls, &c. &c.—Price $6.00.

NEW-YORK STATE AGRICULTURAL SOCIETY.

AT the regular monthly meeting of the Executive Committee of the New-York State Agricultural Society for May—Judge VAN BERGEN in the chair—the following letter, addressed to Vice President LELAND, was read:

DEAR SIR—I have the pleasure to inform you that at a meeting of the Albany Institute, held April 14, 1843, that society voted to the State Agricultural Society the following number of copies of the Transactions of the Society for the Promotion of Arts, Agriculture, &c.

Vol. 1st,........ in boards, 150 copies.
Vol. 2d,........ " 13 "
Vol. 3d,........ " 80 "
Vol. 4th, Part 2, in sheets, 100 "

I have not yet been able to ascertain whether there are perfect copies of Vol. 4, Part 1. They are at all events in sheets.

I remain, very respectfully, yours,
Albany, April 17, 1843. T. ROMEYN BECK.

The thanks of the Society were voted to the Albany Institute, for the donation of books mentioned in Dr. Beck's letter. These volumes embrace the Transactions of the first Agricultural Society formed in this State. It was organized in 1791. Chancellor Livingston was appointed its first president, and continued in that station till the time of his death in 1813. Among the contributors to the volumes, are Chancellor Livingston, Dr. Mitchell, Gen. De Witt, Chancellor Kent, Noah Webster, Dr. T. R. Beck, E. C. Genet, H. G. Spafford, and a great number of others.

The thanks of the Society were also voted to A. Walsh, Esq., for a copy of the 3d vol. of the Memoirs of the Board of Agriculture of this State—to John Hannam, Esq., North Deighton, England, for a copy of his Prize Essay on the "Application of Rape Dust and other hand tillages"—to Carey & Hart, Philadelphia, for the first part of their reprint of the Farmer's Encyclopedia.

Messrs. Prentice, Tucker and M'Intyre were appointed a committee to see to the furnishing and care of the room appropriated to the Society by the Legislature.

On motion, it was resolved that the regular meeting of the Executive Committee for July be held at the Eagle Tavern, *Rochester*, on Wednesday, the 12th, at 9 o'clock, A. M., for the purpose of appointing the Judges for the next Fair, and transacting any other business in relation to the Fair which may be found necessary.

LETTER FROM MISSISSIPPI.

WE make the following extract from a letter from JOHN J. M'CAUGHAN, Esq., to the editors of the Cultivator. We hope some of our correspondents will be able to furnish him with the information he desires, on the improvement and value of reclaimed salt marshes. The Tussuck grass, about which he inquires, has not probably been introduced into this country. The letter is dated Mississippi City, Hancock county, April 5, and the writer says:

"Our country is remarkably poor, all along the Mexican Gulf Coast, from Lake Pontchartrain to Mobile Bay—'Sandy pine woodland,' which makes it the more necessary to collect all the experience of others similarly situated in other regions, for we have none who preceded us here who have tried to combine the various advantages of our country in an agricultural point of view. So far as any effort has been made with the manures (which we have at hand and in great abundance,) on our poor land, such as mud from salt marshes, also mud or decomposed vegetable matter in the bottoms of slow running branches, we have all been surprised at the increased products of our lands. Our convenience to the New-Orleans and Mobile markets, causes a small crop here to be of as much value ordinarily, as a large crop in a country not possessing these advantages, and I think in a few years we shall supply these markets with most of the fruits, (such as peaches, figs, grapes, quinces, pomegranates, oranges, lemons, plums, mulberrys, apricots, nectarines, jujubes, walnuts, pecans, &c. &c.,) vegetables, melons, sweet potatoes, pindars—lambs, kids, pigs, fowls, &c. &c., all of which grow finely in this poor country, and we require nothing but a little increased industry, intelligence and economy to enable us to work all these sources of immense wealth to our long neglected country. But the spirit now manifesting itself in this country, will soon bring about these desirable results.

We have a good deal of salt marsh on our bays and tide water bayous entirely neglected, because none of us know what would be the result of an experiment on them. I have lately surveyed one of 500 acres, which can be enclosed with 700 rods of *levy*, six feet high, which will protect it in the severest gales ever known in these waters. It appears to be mostly formed of decomposed vegetable matter. The ordinary high tide covers it about three inches. It is thickly set with a long broad leaf grass, and a kind of wire grass. The embanking and ditching of this 500 acres would not cost as much as the clearing as much heavy timbered land. Any information which would enable us to calculate with certainty the result of an improvement of this kind, would be of great advantage to the country.

I see in your January no. an account of the 'Tussuck grass,' discovered by Capt. Ross on the Falkland Islands. Can you tell us where the seed or roots can be procured? I think it would be of the greatest importance to us here. We have the 'Maratime district' and the 'rank wet peat bog with the sea spray over it.' We want grasses for hay. We have a good grass for grazing pastures, which is green here about nine months in the year. It is similar to the Bermuda. I got it from the south side of Cuba, where it was spread over the whole country; it grows here on the poorest sand ridges into a perfect *mat*, and bears a great deal of grazing.

Our poor lands will grow from 1000 to 1500 lbs. rice per acre, and I think will double that quantity with proper manuring and cultivation. But the great advantage of our country is its universal health. On that subject I fancy we have the advantage of any other place on earth. Our country is filled with the purest free stone water, which, with our pure sea breeze, abundance of fine fish and oysters, make, to my mind, ample atonement for our poor soil."

STATE AGRICULTURAL FAIR AT ROCHESTER.

IN our last number we gave place to the decision of the Executive Committee of the State Society, fixing the next annual Cattle Show and Fair at Rochester, and to the list of premiums which will be there awarded. The number, variety, and amount of the premiums offered, in almost every department of agriculture and domestsc industry, as well as mechanic arts, will arrest the attention of all interested in the progress of these great interests, and excite, we doubt not, a spirited competition. We are pleased to perceive that the selection of Rochester as the place of meeting, appears to have met with the general approbation of our friends at the west, and that spirited efforts have been already commenced, and the initiative arrangements entered into, to render the meeting worthy of New-York, and particularly of the west. The materials for a superior show are certainly most abundant; and with the advantages of the experience gained in the two preceding years, there can be nothing, save supineness and lack of energy, to prevent the show at Rochester equaling any that have yet taken place in this country.

Western New-York has many pure blooded animals that would do honor to any collection, and multitudes of grades of the Short Horns and Devons, as well as of native stock, that can with difficulty be equaled any where. We hope to see great numbers of all these on the ground, and not have the contest and comparisons so wholly confined to the imported or pure bloods. There are great advantages for the concentration of animals, agricultural products, &c. at Rochester, and we doubt not that we shall have the pleasure of witnessing a collection worthy of the public spirited farmers of western New-York. As that spirited association, the Mechanic's Institute of Rochester, as well as the Monroe Co. Ag. Society, will unite with the State Society in the Fair, we may reasonably expect a grand display of the products of the various mechanic arts, for which Rochester has become so celebrated, as well as of the more common products of the field and the orchard. The journals of the west will doubtless place this matter before their readers in such a way as to call out, in their full strength, the active and enterprising population of farmers, who have in so short a time converted such a region of wilderness into one of the most fruitful portions of the globe.

FRANCE BEFORE THE REVOLUTION.

WE have been much impressed in reading Alison's History of Europe, which the Harpers are now issuing, with the deplorable condition of the French Agriculturists previous to the Revolution which overturned temple and throne in that country. The only wonder an American experiences is, not that such a terrible revulsion took place, but that human nature could have endured such oppression and indignities so long. Things are bad enough now in some of the continental countries, but thank Heaven such oppression would now be met by prompt and overwhelming resistance. We condense from the first volume of the History some facts to substantiate our remarks.

The taxes, exclusively affecting agricultural labor, amounted to about 30 millions of dollars. So excessive was their burden, that Sir Arthur Young calculated that supposing the produce of an acre worth £3 2s. 7d., the proportion which went to the King was £1 18s. 4d.; to the landlord 18s, and to the farmer 5s. In other words, if the produce of the acre was divided into 12 parts, nearly 7½ went to the King, 3½ to the proprietor, and one to the farmer. But this, though deplorably bad, was made still more intolerable by the game laws, which fettered the most important operations of agriculture. Game of the most destructive kind to the crops were permitted to go at large. Large herds of deer, and numbers of wild boars, to be hunted for the amusement of the great, ravaged the unenclosed fields. The damage done to four parishes in Montceau, amounted from this cause to about 40,000 dollars. Numerous edicts existed which prohibited the cultivator from hoeing and weeding, lest the young partridges should be destroyed; from mowing hay lest the eggs should be destroyed; taking away the stubble lest the birds should be deprived of shelter; manuring with night soil lest the flavor of this game should be injured. The people were bound to grind their corn at the landlord's mill; press their grapes at his press; and bake their bread at his oven. The use of hand-mills was not free, and the proprietors had the power of selling to the laborers the right or privilege of pounding buckwheat or barley between two stones.

We repeat, it cannot be wondered at, that a spring so enormously loaded, should, when the pressure was suddenly removed, react far beyond any safe or manageable bounds. The enslaved, oppressed, trodden down peasant of France, had a long arrear of vengeance and bitter wrong to settle with the oppressor, and every line of the long account was summed up in blood.

CONVENTION OF BREEDERS.

(CIRCULAR.)

Albany, June, 1843.

THE State Agricultural Society of New-York, desirous that some fixed principles should be established as the basis of excellence in the various descriptions of farm-stock, (without reference to their *relative* merits as breeds,) have appointed the undersigned a committee with instructions to call the particular attention of breeders throughout the States, to the importance of the subject, and to make the necessary arrangements for a Convention to be held at the Library Room of the American Institute, in the city of New-York, during its 16th annual Fair, in the month of Oct. next, the day to be hereafter noticed; at which breeders of stock and those interested in Agriculture, are most respectfully urged to give their attendance, with a view to a full and free discussion of those forms, qualities and properties which most conduce to intrinsic value; and also that the distinctive characteristics of each separate breed may be as closely defined as possible.

The Society believe that the decision of such a meeting will offer to the agriculturist the best information that can, at present, be elicited; and which, they trust, may be so satisfactory to the mind of every intelligent breeder, as to lead to greater uniformity of action and opinion, and *possibly* become a standard with them, by which to judge and be judged, in all cases of competition.

With these views of the subject, the committee hope you may deem it of sufficient importance to be present at the proposed Convention, and lend to its discussion the aid of your experience and talents.

The committee will be obliged by any suggestions, in the interim, you may consider of sufficient importance to be communicated to them in relation to this subject.

FRANCIS ROTCH, C. N. BEMENT,
E. P. PRENTICE, GEORGE VAIL,
LEWIS F. ALLEN.

☞ Editors of the several Agricultural papers in the United States, are requested to publish or notice the above.

DR. CLOUD'S IMPROVED CULTURE OF COTTON.

As was to be expected, and as indeed was desired, the papers of Dr. Cloud, lately published in the Cultivator, on the method practiced by him in the culture of cotton, by which he has grown nearly 6,000 lbs. per acre, have elicited much attention and discussion in the papers of the cotton growing region of the United States. We should not recur to the subject here, were it not one of paramount interest to the country, and to great numbers of our subscribers; and were it not that the principle adopted by Dr. Cloud, is the one practiced at the north, by many in the culture of corn, and which has rendered crops of 100 bushels to the acre a common occurrence.

We have been somewhat amused at the different views presented of the subject, by different journals at the south. A writer in the S. Carolina Advocate and Register of Agriculture, says that the statement of Dr. Cloud will not be credited by 99 in 100 of the planters of that state; and that it will be supposed some mistake occurred in the weight of cotton, or measurement of land. The reason given for this disbelief, is, that the highest production yet reached is about 3,000 lbs. per acre; and the writer himself had never, with the best cultivation, exceeeded 2,300 pounds per acre. At a meeting of the Monticello Planter's Society, Mr. Means proposed a premium of a silver cup for any member making on old land, after the plan of Dr. Cloud, 3,000 or more lbs. of cotton per acre; and Col. Davis moved an amendment by inserting "*any plan*" instead of Dr. Cloud's plan, stating that he considered such a production in that plan impossible, and expressing doubts of *mistake* in the premises or the conclusions.

These opinions of cotton planters would have been entitled to more weight, certainly with us, had we not recollected that these men were also corn as well as cotton growers; and that only a short time since, a planter in the same journal that contains these remarks on Dr. Cloud's system of cotton culture, declared that neither Judge Buel, or any other man, ever saw 75 bushels of corn grown on an acre, and that any planter should be satisfied with a crop of 25 bushels per acre. Such assertions would seem to indicate that there are some districts, or at least some individuals, not yet attached to the party of progress, and still adhering with blind reverence to the practices of the past.

Our friends of the Nashville Agriculturist, a capital paper by the way, introduce a few remarks in explanation of the plan of Dr. Cloud, under the caption of "Big Humbug;" and close by recommending to cotton planters to go on in the old fashion in the culture of that crop. We are much surprised to hear a paper, that in every thing else is an ardent and consistent friend of improvement, urging a continuance in the "old fashion" of cultivating the most important crop of the south, when it is admitted by all, that that fashion is one of pure skinning, and that the following it so long has nearly ruined the soil, if it has not the planters of the south. Cultivating large quantities of land, and raising but small crops, is a practice rapidly going out of fashion among good planters and farmers; and tilling small quantities of land, well, and raising corresponding crops, is a system commending itself to every friend of agricultural improvement; and this is precisely what Dr. Cloud inculcates. Experience teaches that no matter what may be the article cultivated, if the crop does not reach a certain amount, there is a loss; if it equals that amount, the debt and credit are equal, the farmer makes nothing, and loses nothing; while all that exceeds this amount is a clear profit to the cultivator. If to procure this excess of crop, the farmer or planter incurred great expenses for that which would produce no permanent benefit to the soil, he might still be a loser; but such is not the case where the expense incurred is for manures, as this extra expense is amply repaid by the improvement of the soil, and the consequent increase of the succeeding crops. The amount of manure proposed by Dr. Cloud, is certainly large, but the quantity of manure is not the question in doubt; it is not that which entitles the plan in the language of the Agriculturist, to the name of "Big Humbug." We remember the time in this state, and we have a right to presume it was so in Kentucky and Tennessee, when raising 50 bushels of wheat, or 100 bushels of corn to the acre, was pronounced "big humbugs," or something worse, but now the commonness of such crops is such as scarcely to excite remark.

The "South Western Farmer," a journal ably conducted by our former correspondent, M. W. Phillips, Esq., is almost the only one of the many southern papers that we have noticed, in which the plan of Dr. Cloud is properly appreciated, or noticed in that spirit of a true planter, in which it was written. Instead of condemning the system proposed by Dr. Cloud, almost unread, and certainly untried, as some others have done, the Farmer advises that it be carefully read, and an experiment instituted to test its merits. That Mr. Phillips is well acquainted with the culture of cotton, his papers on that subject in the Cultivator, prove beyond a question; and if he has doubts whether the average crop can be brought up to Dr. Cloud's standard, he has none whatever that a vast increase of crop and profit would be the result of its adoption as far and as fast as practicable. In corroboration of the possibility of the crop stated by Dr. C., and to show what a rich soil and more room than is usually allowed will do for cotton, the Farmer adduces the case of Gen. Dunlap, who last season took from one stalk in his garden, cotton, at a rate, which at the number of stalks or hills allowed by Dr. C., would have given 20,000 lbs to the acre. The Farmer justly says that if the acreable product could be increased to only 2,000 lbs., "it would pay a great interest on the capital invested; instead of cultivating six or seven acres to make five bales, we could then make it on three, and have half of our cultivation as now practiced, to devote to improving in manures and other matters." The editors of the Farmer are intending to give Dr. Cloud's system a fair trial the present season, and decide accordingly; a course certainly dictated by common sense.

We have noticed that some writers have in effect deprecated this increase of cotton per acre, as tending to lower the price of an article, the supply of which already appears to equal the demand. This is spoken of in a way which would lead one to suppose the writers were in favor of literally throwing away one-half the productive labor of the cotton growing states, rather than divert it into other channels; or as if there were no other kinds of cultivation to which this labor could be profitably directed. If this is so, if it is necessary to grow cotton at the rate of half a bale or a bale to the acre, because there is no other way to absorb, profitably, the capital held by the planter in labor, then we have only to say that there is something wrong somewhere, and that the sooner the evil is corrected, the better for the country. At the north, we are in the habit of reasoning differently, and if we can raise on five acres the wheat and corn we used to on ten, we deem our labor reduced one-half, and five acres gained for other agricultural purposes; and we have no doubt if our southern brethren, could, by adopting Dr. Cloud's method, or any other, double their average product of cotton per acre, they would find a similar benefit in the results.

From present indications the best effects may be anticipated from the experiments and publications of Dr. Cloud. It has called the attention of planters to the subject, and has led to those inquiries which are always the first step in all improvements. Planters begin to ask whether they cannot raise the same amount of cotton now produced, with less land, fewer hands, and more profit, by adopting a better system, and devoting the labor thus saved to the improvement of their farms, the raising of stock, and the culture of crops necessary for home consumption. Many have become convinced from the results of the past, that unless they adopt a different course they cannot sustain themselves; and all will see that because they cannot manure 500 acres in the manner proposed by Dr. Cloud, it does not follow they cannot treat 50 acres in that way.

We invite our subscribers in the south to furnish us the results of their experience, and such suggestions in relation to the improvement of the agriculture of that section of the country as the state of things demand. The large and fast increasing circulation of the Cultivator in the cotton growing states, renders this invitation peculiarly proper at the present time.

HARRIS' TREATISE ON INSECTS.

This is the title of one of the most valuable contributions yet made to the American agriculturist. It is from the pen of Dr. T. W. Harris of Boston, and does not differ essentially from the Report submitted by him to the legislature of Massachusetts in 1841. The form and price of this edition, however, is such as to place it within the reach of almost every one, and we are confident every farmer will find it a most valuable acquisition. It describes in a more particular manner, those insects injurious to vegetation, and the list is truly a formidable one. There can be no doubt that the agriculture of any country suffers more from the insect tribes, than from all the other classes of animated nature combined; and all the bears, wolves, and foxes of the United States, produce not a tithe of the damage which the farmer receives from the curculio, Hessian fly, or wire worm. What these depredators lack in strength, they make up in numbers, voracity, and fecundity. Although constantly among them, and annually suffering from their presence, but very little is clearly known respecting the habits of insects, by the majority of those most interested; and any work which makes us better acquainted with them, will enable us to guard against their depredations and increase more effectually. The publication of Koollar is a valuable one, but many of the insects described by him are as yet unknown in this country, and some of our most destructive ones do not seem to have been noticed by him at all. Interesting as the study of Entomology is, independent of economical considerations, the importance of a more general acquaintance with the subject is greatly increased when the latter are taken into the account. In looking over the volume we find but one thing which much excites our regret, and that is the absence of figures of the principal insects or those which do the most injury. To the person who has not made Entomology a study, engraving of the principal species, are like maps to the student of geography, essential to his success and progress. They fix the general appearance more distinctly in the mind, and enable the observer to detect the insect required at a glance, and with greater certainty. So far as regards the descriptive part, Dr. Harris has left little to desire; we trust that the forthcoming work of Dr. DeKay, as part of the great work on the Natural History of New-York, will be all that is needed in both departments, the descriptive and the illustrative. In the meantime, we recommend the volume of Dr. Harris as the most perfect and useful history of our depredating insects, that has yet appeared in this country. John Owen of Cambridge, Mass., publisher; pages, octavo, 460; price $2,50.

STEPHEN'S YUCATAN—AGRICULTURE.

One of the most interesting books of the season most certainly is Stephens' Incidents of Travel in Yucatan As a writer of travels he is unrivaled; and the skill and perseverance shown in hunting up, and rescuing from the devouring tooth of time, the astonishing but hitherto unknown monuments of the past in Yucatan, is deserving all commendation. The discoveries he has made demonstrate that an immense population must have existed in that country, at the period of the construction of these ruined cities, to say nothing of the advance in the arts, which the sculptures prove they had made. But this is not the place, nor is our publication the medium for a review of such a work. That it will command the attention of the curious and learned everywhere, there can be no doubt; our object is to make an extract or two, showing some facts connected with the agriculture of that region.

Yucatan is a vast peninsula, nearly the whole of which, with the exception of a central range of hills, or sierra, is based on transition limestone, and remarably level and fertile. Geologically, it much resembles a large part of Kentucky, and like that state, abounds in limestone caves, deep pits, and subterranean waters. After noticing some of the articles cultivated for food, Mr. Stephens adds:—"Indian corn, however, is the great staple, and the cultivation of this probably differs but little now from the system followed by the Indians before the conquest. In the dry season, generally in the months of January or February, a place is selected in the woods, from which the trees are cut down and burned. In May or June, the corn is planted. This is done by making little holes with a pointed stick, putting in a few grains of corn and covering them over. Once in the ground, the corn is left to take care of itself, and if it will not grow, it is considered that the land is not worth having. The corn has a fair start with the weeds, and they keep pace amicably together. The hoe, plow, and harrow, are entirely unknown; indeed, in general neither of the two last could be used on account of the stony face of the country; the machete is the only instrument employed."

This method of planting corn reminds us of the manner in which we, some 40 years since, saw corn planted by some of the pioneers of Western New-York. The trees were felled during the winter, and the logs and brush burned off in the spring. The settler who had no plow and needed none, took an old axe, rather blunt in the bit, and striking it into the ground made an opening in which the seed was deposited. A single cutting down of the "fire weeds," if they threatened to choke the crop, was the extent of cultivation, and beautiful corn was usually the result.

The following is the method of threshing the corn, as practiced on the estate of Don Simon Peon, at Uxmal. If primitive, we think it would be effectual.

"On one side of the clearing was a great pile, or small mountain of corn in the ear, ready to be threshed, and near by was the threshing machine, which certainly could not be considered an infringement of any Yankee patent right. It was a rude scaffold about 18 or 20 feet square, made of four upright untrimmed posts for corners, with poles lashed to them horizontally, three or four feet from the ground, and across these was a layer of sticks about an inch thick, side by side; the whole might have served as a rude model of the first bedstead ever made.

"The parallel sticks served as a threshing floor, on which was spread a thick layer of corn. On each side a rude ladder of two or three rounds rested against the floor, and on each of these ladders stood a nearly naked Indian, with a long pole in his hand beating the corn. The grains fell through, and at each corner under the floor, was a man with a brush made of bushes, sweeping off the cobs. The shelled corn was afterwards taken up in baskets and carried to the hacienda."

The rapidity with which vegetation progresses in those tropical regions is most astonishing. The fact that vast trees were growing on the mounds and ruins of Gautemala and Yucatan, has been adduced as proof of the necessary antiquity of these ruins; but those who so argue, seem to lose sight of another fact, which is, that in a tropical clime a tree will in a few years attain a size for which centuries would be requisite in a less genial one. We think those who have carried back the age of the Baobab, (*Adansonia,*) found on the coast of Africa, to some centuries before the era of the deluge, have fallen into this mistake. At page 286, vol. 1st, Mr. Stephens has given an engraving of a Seybo tree, which at five feet from the ground was 17½ feet in circumference, and yet it was only 23 years old. Indeed, one of the most efficient agents in destroying those wonderful structures of Central America, is to be found in its luxuriant vegetation. Trees take root on all the deserted walls and terraces. Their roots penetrate their crevices, and this seemingly unimportant power is soon irresistible. Frescoes crumble, pavements and staircases upheave, and walls and cornices tumble before the force of this silent but resistless enemy, tropical vegetation. It is much to be regretted that a vast mass of the most curious sculptures, carvings, &c. found by Mr. Stephens, and with much trouble and expense transported to New-York, should, so soon after their arrival have been destroyed by fire.

"A correspondent of the Southern Planter recommends sowing broom corn thick on ground moderately rich. Cut when three to five feet high, it makes excellent hay—more in quantity than Indian corn."

DICTIONARY OF TERMS USED IN
Agriculture and its kindred Sciences.

LIGHT.—Two opinions are maintained as to the nature of light. The first, which is the system of Newton, supposes light to be particles, luminous in themselves, thrown off from the sun with inconceivable rapidity, and thus diffused through all space. The second, which found able advocates in Franklin and Euler, and which may be perhaps considered the more general opinion of the philosophical world, refers the sensation of light to the vibrations of a subtle fluid or ether pervading all space, set in motion by peculiar qualities of the luminous body, and producing on the nerves of the eye similar sensations to those effected by the waves of air on the ear. We think the latter theory explains more facts connected with the optics than the former. According to the theory of vibration, the different colors of light are not owing to different colored rays, but to the rapidity or slowness of the vibrations; the more brilliant the color, the more rapid the undulatory motion. But these theories are of little consequence to the agriculturist, compared with the effect which light exercises on the functions of vegetation, which are most extensive and important. All the peculiar secretions of plants owe their formation almost entirely, if not exclusively, to the action of light; and this is effected by the decomposition of the carbonic acid and water, the separation of the watery from the solid parts, the deposition of earthy matters and salts, and the extrication of nitrogen by the action of light on the leaves of plants. To light they owe their color and their fragrance, since if grown in darkness they seem to be destitute of both. "Timber, gum, sugar, acids, starch, oil, resins, odors, flavors, and all the numberless narcotic, acrid, aromatic, pungent, astringent and other principles derived from the vegetable kingdom, are equally influenced, as to quantity and quality, by the amount of light to which the plants producing them are exposed." All plants cannot, however, endure the same quantity of light, some perishing where others flourish. The excellence of fruits and their maturity are mainly depending on this; hence the necessity of a free access of light to all plants; mere heat will not do; the decompositions and recompositions required cannot be effected without this powerful agent. The powerful attraction light exercises on plants, and their fondness, so to speak, for it, is most striking. A potatoe vegetating in a cellar throws off its shoots towards a window, however dim or distant it may be; the branches starting out from trees on the margin of a dense wood have all their growth on the side of the tree next to the light or sun; and we have often seen on the boders of thick woods, millions of little flowers turning their star-like eyes on their bending stems towards the cleared lands, apparently anxious to revel in the light and sun. The effect which light has in changing the qualities of plants is strikingly shown by the common potatoe, when it is partially uncovered by accident, or forced out of the ground in the process of growth. Instead of the white color, and pleasant farinaceous taste, it becomes a dark green, and of a nauseous bitter taste, in no respect, unless in form, resembling those not so exposed to light. Leaves always turn the same side of the leaf to the light, nor can this order be reversed without injury, or an attempt on the part of the leaf to correct it. Take for instance the upright stem of some creeping vine, Bittersweet or Honeysuckle for example, and bend the top downwards, so that the underside of the leaf shall be uppermost. In a few days the leaf will turn on its stem, twisting it one-half round, and regain its original position to the light. In view of the constant and powerful effect of light on other bodies, and when we remember that that, or the cause of it, must be material, we are induced to ask whether light itself, or the producing cause, may not be constantly undergoing solidification by combination with other matters, thus giving rise to those changes which seem inexplicable except on some such theory.

LIME.—This is one of the most important of the earths, and seems to be indispensable in some of its forms, to the purposes of agriculture. Within a few years public attention, both in Europe and the United States, has been drawn to it, as a fertilizer, and although much difference of opinion has existed as to the manner in which its influence is exerted, it cannot be doubted that it is one of the most valuable of manures. It is applied to soils in various quantities, rarely less than 50 bushels per acre, and as an experiment 500 bushels to the acre have been used. So large a quantity cannot be of use, as the experiments of Thaer and Liebig demonstrate that in no crop can but a small part of that quantity of lime be used, while in some it may be positively injurious. The southern part of Pennsylvania, and in Delaware, Maryland, and part of Virginia, are the parts of this country where lime has been most extensively used, and with the most undoubted success. Very few experiments have been made with lime in the northern states, and in them the success, so far as we have been able to learn, has not been very marked or decisive. Perhaps too much of an effect, or one too immediate, has been expected from it, and hence the disrepute or indifference with which it is treated. At the north its most beneficial effects have been most fully shown when made into compost with other earths, vegetable matters, peat, yard manure, &c., than when used alone; although in making such composts it should never be placed in contact with the manures used. Lime varies very much in its quality, and this should always be looked to, when the farmer purchases for application to the soil. Carbonate of magnesia is the most common substance that deteriorates it, and this sometimes equals 40 or 50 per cent. There are some who contend that magnesia does no injury, but as it cannot produce the effect we desire from lime, its presence certainly can do no good; and it would be both better and cheaper for the farmer to use only that lime which is as near purity as can be obtained. In an analysis made by Mr. Frazer, of several of the Pennsylvanian limes, the pure carbonate ranged from 57 to 96 parts in 100; and the carbonate of magnesia from 0 to 42 in 100. Yet the lime which so abounded in magnesia was from a range of limestone passing through several of the best agricultural counties in the state, and where such lime is most extensively used in tillage, and most successfully.

LINSEED.—This is the seed of the common flax, and is one of the most valuable of seeds cultivated for oil. There are three varieties of the plant cultivated, but they do not differ essentially in their habits or qualities from each other. The process of growing, pulling, rotting, and dressing is familiar to most farmers, though such is the value of the lint or flax and the seed, that we think its culture might be profitably extended. For common painting the linseed oil is the best that can be procured, and it forms the base of all varnishes into which oil enters as a part. After the oil is expressed from the seeds, the residue, called oil cake, is one of the most nutritive substances used, and is justly celebrated for fattening animals. When cattle are to be fed on oil cake, they are usually put up at the end of the grass season. The cake, broken or ground fine in mills, is fed to them at the rate of about four quarts a day each, one half in the morning and the other at night. With the oil cake, is also fed cut hay or straw, cob meal, or inferior grain or other matters; and the result is they fatten very rapidly. A small quantity of oil cake fed to horses during the winter, gives their coat a fine sleek appearance, as well as improves their condition. Oil cake is sometimes fed to milch cows, but while it increases the milk, it has the effect of giving it a somewhat unpleasant taste.

LITTER.—When any animal, and particularly the horse, is stabled, a liberal quantity of straw should be spread over the floor on which he stands or lies, and this is called litter. The advantages of this course are that it is easier for the feet of the animal; it is cut up and trampled, so that the straw is more readily converted into manure, and it absorbs a considerable part of the liquid manure, which is not only the most valuable part, but most liable to escape and be lost. Warmth is essential to the comfort of animals, and litter contributes greatly to this effect. The farmer who is careless of supplying his stables, and pig pens, and cattle yards, with litter, to the extent of his ability, is suffering a severe loss.

LOSS OF CUD.—When food has been taken into the stomach of certain animals, as the ox or sheep, it is after a time returned from the stomach to the mouth, to be subjected to a second grinding, or mastication, and this process is termed chewing the cud. This operation is slowly and leisurely performed, and when enough has been ground or masticated to satisfy the cravings of hunger, or fill the comparatively small or true stomach of the animal, he seems to fall, if undisturbed, into a dreamy sort of pleasure, well adapted to the functions of digestion and nutrition. Sometimes the ox will ruminate as he works, but generally work suspends rumination. Rumination is easily interrupted; surprise, fright, or compelling an animal lying down to rise, will do it, but unless there is some further difficulty, chewing the cud will be speedily recommenced. What is called the loss of cud is rather the symptom of disease, than a disease itself. Debility, consequent on poor keeping, is a frequent cause. It generally accompanies complaints attended with fever, and the treatment should be rather directed to the removal of the fever, or determined cause, than to simple restoration of rumination. When inflammation exists, a dose of physic, with a slight portion of some aromatic medicine, will frequently effect a cure; but if there is no fever, and there are indications of general debility, more tonic and aromatic medicine may be given. Caraway and ginger are the best aromatics, and salts will prove one of the best alteratives in the case of loss of cud. There are a host of remedies for loss of cud current among farmers, but as they are directed in general to the symptoms rather than the disease, they are unworthy of notice. Keep your animals well, give them salt frequently, let them have a mess of roots occasionally during the winter, and they will be as little troubled usually with loss of cud, as with the hollow horn.

LUCERNE, (*Medicago sativa.*)—This is one of the most common cultivated grasses in the south of France, in Spain, Italy, and on the shores of the Mediterranean Sea generally, and has been a favorite from the earliest ages. It grows when cultivated some two or three feet high, is perennial, and flowers in June or July. Lucerne requires a deep and light soil, with a free or porous subsoil, and in good condition from cultivation. It will not grow on all soils like some of the clovers, but on a heavy compact soil is sure to prove a failure. Lucerne is to be cultivated much as the clovers, which it greatly resembles in product and quality, except that when sown in drills, and hoed, as it sometimes is, it may be kept in the ground a long time with increasing productiveness. If sown broadcast, and left to take its chance, it is apt to be soon crowded out by the grasses and hardier plants It should be sown in the spring, and from ten to sixteen pounds per acre may be used. It does not arrive at its full growth and productiveness until the third year, but it may be mown or cut from the first year. There is no plant so well adapted to the soiling of animals, particularly the horse, as it is early, grows rapidly, and is eminently wholesome and nutritive. Perhaps there is no better feed for milch cows than lucerne. When attempted in this country on the right soil and in a proper manner, it has succeeded very well, but fears are entertained that in the northern states it will not be found as hardy as clover.

MADDER. (*Rubia tinctorum.*)—This is a plant cultivated for the sake of its roots, of which vast quantities are used for dyeing in the manufactories of Europe and this country. Holland is the most noted country for the production of madder, and from the superior mode of cultivation, drying, sorting, and grinding, the Dutch madder is considered better than any other. Madder requires a rich, deep, and rather sandy soil, or if not sandy, one that has been well drained. The seed, which consists of cuttings from the previous year's growth, is planted in rows 18 inches apart, and the plants 12 inches in the rows. Some of the most successful growers in this country, however, prefer planting in beds six feet wide, with four rows of plants in a bed, and a space of nine feet between the beds unoccupied. This space may be planted the first season with corn or potatoes, without injury to the madder crop, and is useful as a space over which a team with manures or compost for the madder beds, if necessary, may be driven. The slips of the second year are the best for seed, and three years are required for the roots to arrive at maturity. Much of the profit of the madder crop consists in the manner in which the tops of the plant are laid down and covered at each dressing of the rows or beds, since all so covered is converted into root, and is equally rich in coloring matter with the original ones. It is estimated in England, that five lbs. of fresh roots go as far as four lbs. of dry ones; and as from six to seven-eighths in weight are lost in drying, it is clear that where practicable it is much the best to use the fresh root. It is, however, usually dried in large rooms, or ovens of moderate heat, and then ground and packed in barrels for market.

MAD ITCH.—This is the name given in the western states, where it most prevails, to a disease of cattle, commencing with apparently spasmodic motions or jerkings of the head, and itching around the nose and base of the horns. They will lick their sides and back, rub their herds, and the jerk or hiccup inflates them with wind almost to bursting. This symptom is not, however, always present. As the itching increases, the animal rubs more furiously, froths at the mouth, and finally in from twelve to twenty-four hours, dies raving mad. Mr. Simms of Indiana, after losing several of his cows by this disease, succeeded in curing the remainder by the following treatment. As soon as the animal was attacked, he gave it as much soot and salt as it would eat. In a few hours he gave from three-fourths of a lb. to a lb. of pounded brimstone or sulphur; and in the morning as many salts. It is the opinion of Mr. S. that sulphur alone would effect a cure, though he accompanied its action with salts. The cause of this formidable complaint like that of milk sickness in the same region, is unknown.

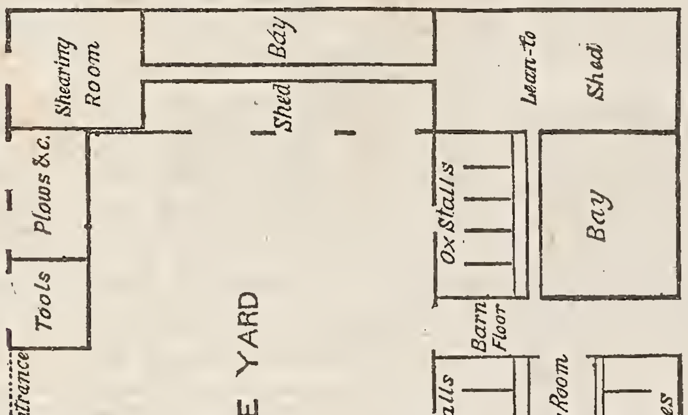
MADNESS.—One of the most formidable and dangerous diseases to which animals are subject, is madness, or *rabies.* It usually originates in some domestic animal as a disease, commonly in the dog, and the infection is communicated to others, by biting or by allowing the saliva or froth of the mad animal to fall upon, or be injected into a wound on the bodies of others. The saliva of an ox, or of a man, laboring under the hydrophobia, is as dangerous and fatal as that of the dog that originated the disease. Unfortunately there is as yet no effectual remedy for this disease. Instant and complete excision, or cutting out the wounded parts, is probably the most certain preventive of the disease. Next to this, bringing a pencil of lunar caustic, the point made sharp, so as to touch every part of the wound, into contact with every part, will be most effectual. When an animal has been bitten, he must be carefully examined to ascertain all the wounded parts, as the smallest scratch may be fatal, and cutting or burning one will be of little avail, if others are overlooked. Animals rarely show that dread of water when mad, that characterizes the disease in man; and they will frequently drink freely of water till the last. Among animals there are two kinds of the disease; the dumb madness, and the excited or raving madness. In the first, the animal is frequently harmless through the whole of the disease; in the second, he is most ferocious and seems eager to destroy. But in all cases, no chance for mischief should be allowed, as the disease at times seems suddenly to change, and the dog or the bull will inflict the most terrible injuries. Singular as it may seem, the milk, or even the flesh of animals suffering from madness, may be used without the least danger. The poison is no where evolved except in the saliva, and however unpleasant it might be to the imagination to feed on the milk or flesh of a rabid animal, no fatal or indeed injurious results, need be apprehended.

TO DESTROY SLUGS UPON WHEAT.—Collect a number of lean ducks; keep them all day without food, and turn them into the fields towards evening; each duck would devour the slugs much faster than a man could collect them, and then get fat for market.—*Nashville Ag.*

IT has been remarked before the American Institute, that "the revival of Agriculture commenced in Flanders, about seven hundred years ago. There the soil was little better than white barren sand—now its increase is said to be twice as great as that in England. The grand maxim on which the Flemish farmer acts, is, without *manure,* no corn—without cattle, no manure—and without *root crops,* no cattle."—*Ib.*

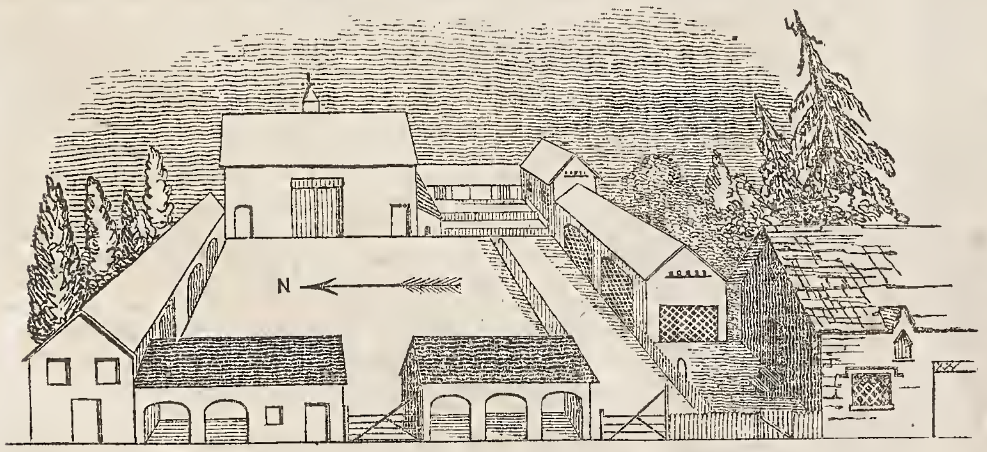
PLANS OF FARM BUILDINGS.

Messrs. Gaylord & Tucker—Within are some plans, which, though not done in an artist's way, and void of accuracy in detail, may yet suit the convenience of some of your thousand patrons, or suggest arrangements to mature a happier system of their own. I have endeavored to adapt them to the circumstances of a majority of your readers, both as regards their farming interests and personal estate. The poor (in funds,) will want a poorer; the rich a more ostentatious dwelling; and the *disputatio de gustibus* will furnish sundry other malcontents.



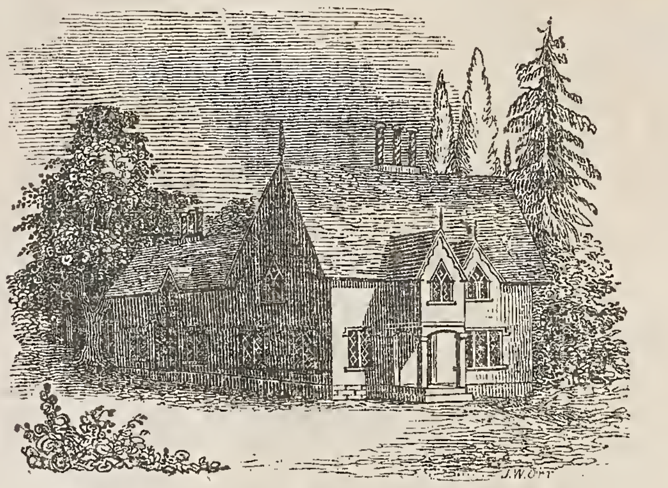
Ground Plan of all the Buildings.—(Fig. 45.)

First is the ground plan of all the buildings proposed, (fig. 45.) Entering by the porch at the extreme left of the diagram, we find a hall lighted from the west, with a flight of stairs leading to three good sized chambers. A door at the right, opening upon a snug library or parlor, or business room; immediately before the entrance we open upon the sitting room—the dining room, in short, the family room, the farmer's *sine qua non*. To the left, are passages to the library or parlor again, to closet, and through back entry to bed room. Before opens the way to kitchen. Passing out of the kitchen to the left, we enter upon the porch, running the length of kitchen and dwelling; following on to the right, and turning to left, we enter a spacious wood house. Through this we reach the door to kettle room, (the eye must follow the plan as well as *exposé*,) and the potatoe cellar, with a little slide window. Ascending (steps are marked on chart,) to the farther end from that on which we entered, we find ourselves on a rude veranda, formed by the projecting eaves of the poultry house and granary; along this, doors open upon hens, eggs, and grain; while on the other side, below you by three or four feet, are the pigs again. The cutting room claims attention next. It surely is not far to carry fodder to horses and oxen on either side, and it is lighted by good sized window over top of sty, which, by the way, is a leanto which is attached to barn. Upon the barn floor is a trap door, and above it a slight tackle; the trap door opens upon a mammoth cellar for roots, and the tackle brings them to the mouths of hearty beeves. But on, by gang-way to extreme end of barn, we pass stalls on left, and bay to the right, under edge of which is an opening to the rack in the open cellar below, to throw fodder to the young stock. Passing down a step or two at end of gang-way and through large shed, we come upon another gang-way, (built to walk on,) on one side of which is a rack under an open shed, on the other a bay. Passing up a step or two at the end, is a door to shearing room; above it a lathed and plastered wool room, (and I should have remarked, that over the kettle room is a grand large work shop.) Out at the front of this temple of fleeces, and we are on the ground again, and with a glance at some well built sheds, whose outline is on the plan, for tools, carts, etc. Look at my picture of them, (fig. 46,) barn and all, from where you stand.



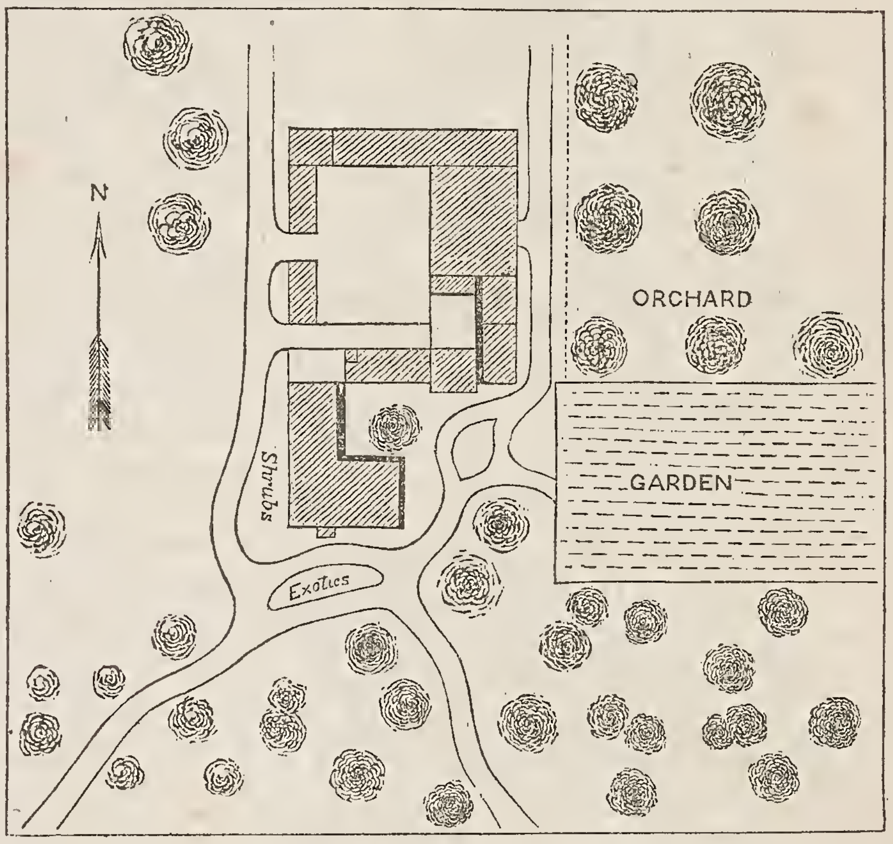
Barn, Out Buildings, and part of Dairy, from the west.—(Fig. 46.)

Passing along a smooth graveled way, by dairy and kitchen and all, see again a view of the house in perspective, (fig. 47.)



View of House from the southwest.—(Fig. 47.)

The laying out of the grounds is here, (fig. 48.



Plan of Buildings and Grounds.—(Fig. 48.)

A word as to specifications and estimates. The first, further than I have given by my outlines, I consider useless, as each one's need will suggest deviations from any rule laid down. All that is essential to the unity of the plan is the preservation of correct proportions. The eye of taste will guide in this matter; the eye without taste, will never see the lack of precision. Let those wishing fuller specifications, first resolve the dilemma.

The estimate could be made, but how should it be made? For brick, stone, wood, stuccoed, plain or ornamented? Shall it be made in view of the superintendence of an intelligent proprietor, saving, by a thousand means, what to the indifferent would swell the outlay by thousands? $2,500 would finish the buildings enumerated cheaply,—$3,500 well,—and $5,500 elegantly. Nearer than this, in view of contingencies, it is impossible to come.

The style of building will admit of much more cheapness, consistent with beauty, than an ordinary farm-house; and it will admit of an ornateness, in the hands of taste and wealth, to please the most lavish. The poor man may cover the chestnut of the frame, taken from his own grove, with plain boards, well battoned; within, he may lath and plaster, cheap as lime and sand. The wealthy may hang black oaken wainscotings, wrought into the rich forms of Gothic wildness—arching his polished jambs crowning his doors with vine leaves; without, he may have hewn stone labels, and elegantly cut tracery, and oriel windows of many colored glass, with all the *et ceteras* that blend so gloriously in the old abbeys (I have seen their portraits,) of olden time.

The advantages of the plan laid down are, first, that the house and yard are effectually protected from cold winds by the out buildings; and there is a most gracious shelter from northeasters about the kitchen door. Secondly, every cool breeze of summer has full play upon the east, west, and south of dwelling. The effluvia and noise, and offensive sights of barn yard, are effectually shut off from the house, though near enough for every convenience. The maid may empty her pail of swill, (I like the Saxon,) without wetting a stray lock or a dainty slipper. The farmer, too, in sickness or in storm, may see to the health and provisions of every animal, without encountering the weather. The wood house is in grateful contiguity with the kitchen; the piggery, with potatocs and kettle; the shop overhead takes advantage of the chimney for a winter day's work. The poultry yard is near the piggery, the cattle yard, the granary, and (best of all) the cook; the granary is convenient to the pigs, the poultry, the horse and the cattle.

A word in anticipating objections. "The house is too near the noise and effluvia of the barnyard." I plead guilty in a measure; but on reference to the plan, it will be seen that the wood house and shop, and lane, intervene, and prevent all unpleasant connection. Again, summer winds blow in general (in this climate,) from the dwelling, carrying in opposite direction disagreeable effluvia. But after all, the farmer who is ashamed of his cattle yard, or its odors, had best set his house from them a goodly distance indeed! "But the buildings are too closely united, a fire would prove disastrous." True, but get insured, and *keep insured*. Industry will pay for the policy.

D. G. Mitchell.

Salem, Conn., 1843.

THE ENEMIES AND DISEASES OF WHEAT.

Messrs. Editors—In a former paper I gave you some of my opinions on the proper culture of wheat, and the result of some experiments I had instituted in reference to that subject; and with your leave I will now offer some remarks on the enemies and the diseases to which this crop is liable.

So far as regards the enemies of wheat, we are all sadly in the dark. Names and insects are confounded in different parts of the country; and the characters of our insect depredators have not received that attention from men of science necessary to the proper elucidation of their history, or their proper place and classification. Let us hope that the forthcoming entomological section of the survey of this state will remedy this evil, and give the farmer, who is more interested in a correct knowledge of insects than any other man, the knowledge so essential to protecting their crops from such ravagers.

Perhaps the insect which produces the most extended injury to wheat in the United States, is the Hessian Fly. As this insect made its appearance on Long Island, or first attracted notice, while the British or German troops occupied that place during the revolution, it was naturally supposed that it had accompanied the invaders, although it seems still doubtful whether the Hessian fly, or what we term such, is now found in Germany. The family or genus Tipulæ to which this insect belongs, is very numerous, and it is probable there is more than one species whose habits and destructive tendencies are similar. The fly deposits its eggs at the base of the leaves near the surface of the earth, and when developed the larvæ preys on the stem, exhausting it of its juices, weakening the stalk, and where they are numerous causing it to break off near the root, or fall down, by which it is lost. It would be useless for me to enter upon a history of the various conjectures which have been started with reference to the manner in which its eggs are deposited and the changes it undergoes. The farmer more commonly sees it in the chrysalis state, in which it resembles a pale flaxseed in size and color, and this is usually its state at harvest time. This fact, connected with others, would seem to prove that two crops of insects are sometimes, or indeed generally produced, where wheat is much damaged; one, the eggs of which are laid in the autumn sown wheat and pass the winter in the chrysalis state, and the other from eggs laid in the wheat in May or June, by insects produced from the aforesaid chrysalis. These in their turn become perfect insects in season to perpetuate their race and their mischief on the fall grain. I have never known any good results arise from experiments on wheat after it is once attacked; all useful measures must be preventive. In the first place all stubble in which the fly is known to exist should be plowed under, and as deep as possible, as soon as the crop is taken from the ground. In this way the greater part will be destroyed, and further attacks mostly be prevented. As the period of the perfect insect is but a few days, the seeding of the fall sown wheat should be delayed in those districts where the fly has prevailed, until that period is over. I have always observed in years when the fly was found at all, that the earliest sown wheat was the most damaged; and at times a field of wheat sown in August has been greatly damaged, while one put in the middle of September wholly escaped. There is, however, a serious obstacle to sowing wheat too late, and that is the danger of freezing out in our hard winters, owing to its being imperfectly rooted; consequently late sowing should never be practiced unless the danger of the fly is such as to justify the risk. Experience shows that some wheats are less liable to injury than others, and such are those having hard stiff stems, as the Black sea and the Mediterranean; but I believe more is depending on the time of sowing than any thing else. As a general rule, if the wheat is attacked to any extent in the fall, a poor crop may be expected, as in such cases they rarely fail of appearing in multiplied numbers in the summer.

The Wheat Worm, which has been so destructive in the eastern part of New-York and in the New England states, as for a time almost to put a stop to the culture of wheat, has not prevailed to any extent in Western New-York. I have for years observed a few of them, and long before they had attracted general notice, a friend stated that in clearing up about a hundred bushels of wheat, he found, much to his surprise, nearly a bushel of the wheat worm was collected. The next year, he had none in his wheat, and I have observed this result in my own wheat frequently. As the parent of the wheat worm is a fly, and the egg is deposited in the ear or the kernel while soft, and as its range of existence as a perfect insect is limited, it would seem probable that any application which should render the growing wheat disagreeable to the fly, or the air unfit for its respiration, would drive it from the wheat. A number of instances are on record in which sprinkling caustic lime over a field when the dew was on, saved it from the worm, but the lime must be recently slaked, so as to be in the form of an impalpable powder, and it should be applied in season, or before the wheat ear is attacked, or little good will be done. All flies are extremely averse to smoke, and as the fly is most active in depositing its eggs about sundown, making smokes on the windward side of wheat fields was resorted to by some farmers with benefit, as the smoke floating over and among the wheat compelled the insect to change its quarters without delay. All pungent or offensive odors have the same result, as the smoke of sulphur, or the stench of the skunk, which last I can readily believe would give them their quietus. Late sowing of spring wheat was found the most sure preventive during the prevalence of this pest, as it did not show the ears until the time of the fly was over; but it was found that such wheat was more liable to be affected by blight than earlier sown crops. It may be considered a fortunate event for the world, that all these various depredators on farm products do not usually exert their destructive energies for any considerable time; but owing to causes which we cannot explain, seem to perform their mission of devastation and pass away, perhaps not to be heard from again in the same way, for years.

The Weevil does not attack wheat in the field, but only in granaries or in stacks. It is rarely found in the north, though extremely troublesome at the south and in all warm climates. The wheat worm was frequently called the weevil, but the parent of the one is a fly, of the other a bug, and it should be remembered that all weevils or cuculios, are bugs, and never flies. Last summer I received from the south a parcel of the Mediterranean wheat, and when I opened it for sowing, I found that it was much damaged by the weevil. As an experiment, I picked out a few of the weevil, and with some good sound wheat, placed them in a vial closely stopped, wrapped in thick paper so as to make it dark and put it away. Opening it for examination a few days since, I found they had been very industrious, a large portion of the kernels having been perforated and all the flour eaten out. Some of the bugs appeared to be dead, but as they always on the least disturbance feign death, I am unable to say whether they were actually defunct, or only "playing possum." The parent weevil deposits its eggs in the kernels while in the granary, and the destruction they frequently cause is immense. A series of experiments to determine the best method of preventing the injury it occasions, has been carried on by the French Institute, and it was found that frequent stirring the grain succeeded the best. In all warm countries the difficulty of preserving wheat from the weevil is one of the most serious drawbacks on its culture. Barley is also a favorite grain with the weevil.

There is another insect which sometimes causes much loss to the wheat grower, though its ravages are mostly confined to warmer climates than ours. It belongs to the moths or millers, as they are commonly called, and I think is by Linnæus called *Tinella granella*. It is one of the smallest of moths, and deposits its eggs in the growing grain, much after the manner of the wheat worm fly. The larvæ feed on the inside of the kernel until it is ready to undergo transformation, or does undergo it, and emerges a perfect insect. This moth also attacks Indian corn at the South, and is there improperly called the corn weevil. I have seen this moth in wheat brought from the southern states, and from Texas, in the ear, and the perfect insect was developed after its arrival in this state. The same fact I have also observed in some corn brought in the ear from the Gulf states. It seemed as though nearly every kernel had been perforated, and produced its moth. At the North I have witnessed its presence but once. This was some 20 years since, in a specimen of new wheat at a mill, where many of the kernels were bored, and while in some the worm was still within, in others the moth was escaping. It may be more common, but I have not seen it; and I believe that at the South where it is most destructive, no means of prevention are known.

Wheat in this country is liable to diseases, but there are none which occasion much loss to the wheat grower, smut and mildew excepted. When western New-York was first settled, nearly all the wheat grown, and particularly on any other than oak lands, was very smutty, and washing it, to render it fit for eating, was a common though tedious operation. Where smutty wheat was grown and ground, the flour had a dark color and a most offensive smell. With the progress of cultivation, the evil decreased, but there were few years in which more or less smutty wheat was not produced, and even now enough of it is found to render smut machines in flouring mills necessary. There is no excuse for growing smutty wheat, and our best farmers have excluded it from their premises. Nearly 30 years since, the practice of brining and liming wheat was introduced into the vicinity of Cayuga lake, and the purity and freedom from smut thus occasioned, caused a great demand for Cayuga wheat for seed in the neighboring counties. The practice has spread until now few farmers, who are worthy of the name, will sow seed wheat until it has been brined or limed, and where this operation is properly performed, perfect exemption from smut may be considered as certain. Smut is unquestionably an infectious disease. The best and purest wheat in the world, if mixed with smut, or transported in bags used for carrying smutty wheat, will produce smutty grain; and some instances have come under my notice, in which the effect produced by smutty wheat seemed to remain for years in the ground. Five years since, I sowed a small quantity of wheat on one side of a field. It was a new kind, and I supposed it pure, but while sowing it I observed some smutted kernels. At harvest it was as smutty a piece of wheat as one would wish to see. Last year I took another crop of wheat from the same field, and as the seed was fine, dispensed with the use of lime. At harvest, as before, the wheat on this part of the field was very smutty, and by its presence the boundaries of the first smutty part of the crop, could be easily traced. I know of no difference in the quality of the soil, sufficient to account for this fact. Smut is a great nuisance in a wheat crop, and as it may easily be kept from doing injury, no farmer should neglect the proper precautions. There are many substances that will destroy the vitality of this fungus, such as a steep of blue vitriol, an arseniacal solution, &c., but the cheapest and best mode of treatment, is a wash of strong brine, and then drying with caustic lime.

Mildew, rust, blight, are only different names of the same thing, a disease of wheat which it is believed causes more actual loss to the wheat growers of the United States, than all other causes combined. There is rarely a year in which some districts do not suffer from it, and in some years it is general throughout the country to a greater or less degree. In 1842, the wheat crop of western New-York was reduced more than two millions of bushels by this cause alone. In fact, very few samples of wheat can be produced which do not show the influence of this injury. Rust is perhaps the most common name of the disease, as the red color of the stem is one of the first things that attracts notice with the ordinary observer; but to the practiced eye, there is a peculiar hue to every field attacked, which announces with certainty the presence of the disease, as far as the grain can be fairly distinguished by the eye. It is as different from the fine bright hue of sound grain, as is the dark, sunken, cadaverous countenance from that of perfect health.

What is rust, or rather what is the cause of rust? is one of the most important questions that can be proposed by the farmer for solution. He has a beautiful field of wheat; it has stood the winter well, the growth is fine, the ears have shot up to their full height, it has blossomed, and the berry is fast forming, and every thing promises a bountiful crop. Suddenly a change comes over the field. Its healthy hue is gone, it looks dark and sickly. On examination he finds the skin of the stems checked, split, and broken in a thousand places; at first a clear gummy matter exudes from the straw, but it soon on exposure to the air, becomes dark and hard. In a few hours a red rust is apparent on all the places where the straw is split, or the skin broken, which is easily washed or rubbed off. It is soon apparent that the wheat has received a serious if not a fatal injury. The stalk does not ripen, but remains of a dull green color, and the berry ceases to fill. New exudations take place from the stem so long as the circulation remains, and new coverings of rust show themselves, as the first are washed off by rains, or blown away. The stalk and the berry instead of ripening, dry up, shrink, and are comparatively worthless. This description I have drawn from my own observations on my own crops. In one year I have had fields of from 16 to 20 acres so destroyed as hardly to pay for the harvesting; and many farmers in western New-York have the past year found themselves in a similar situation.

Rust has been attributed to honey dew, to insects, to the barberry, and indeed to almost every thing which by any possibility could injure wheat; but I believe facts will show that atmospheric causes acting with energy while the grain is in a peculiar condition, is the true origin of this great evil. Observations of the manner in which this disease attacks wheat, made during many years, have shown me that the following conditions must be present to produce rust in wheat. The weather must be warm at the time of, or immediately preceding the attack; there must be an abundant supply of moisture from showers, dews, or both; the plants must be in that state of their growth when their circulation and growth is most active, and the change in their juices preparing matter for the berry most rapid. These conditions I have never known absent; there are others which frequently accompany, or indeed seem to invite the attack of blight. Thus wheat heavily manured with fresh dung, is very liable to rust; as is that which is late in the season in coming to maturity. In short, I have never known wheat to blight, except under circumstances calculated to force its growth prematurely; or by having its maturity delayed too long for the perfection of that process. The history of blight, appears to me to be somewhat like this. The accompanying heat and moisture force a large quantity of juices into the plant, the power of which is more active at this juncture than at any other time, as is proved by its making immediately previous, or while earing, a greater growth in one week, than in any other month of its life. During the process of conversion into starch, and while in the state of fluid gum, and while every vessel is distended with these juices, the cuticle or skin is softened and weakened by moisture, and finally gives way under the pressure from within. That the stem of wheat, grass, &c. is softened and weakened by rain, is obvious to every farmer, and the skin in that state gives way readily. The juices, half elaborated, escape from the stalk through these openings, clear at first, but soon becoming dark and hard. While in this soft state, it becomes a suitable nidus for the fungus peculiar to wheat, which fixes on it, and in a few hours matures its sporules or minute seeds, which being red, or like iron rust, give the name of rust to this disease of the wheat plant. In this state of things, it is as impossible for the plant to properly mature, as it would be for an animal to exist deprived of the chyle as it was elaborated in the stomach, or the blood after it had formed. The only way to check the escape of this juice from the plant, is to cut off at once the accession of more fluid from the roots, and this is done by cutting the grain. This done, a partial circulation will exist in the stalk for a limited time, and what juice the berry receives will be of the quality required, which it would not be, if forced from the stem by the presence of unorganised juices. For these reasons I have invariably found that when wheat was badly attacked, and the juices had begun to exude, the sooner it was cut the better; and in this I believe every farmer who has tried the experiment will concur with me.

If I am right in my conjectures as to the cause of blight, it is evident the farmer can do comparatively little to avert the disease. He can indeed avoid direct and heavy manuring; he can avoid sowing so late as to render it certain the wheat cannot mature in season; he can use substances favorable to the formation of the silicates required to give hardness and firmness to the stem, as ashes, and other alkalies; he can plow or sow his wheat in drills, to enable the air to circulate among his grain more freely and more quickly dry up the pernicious moisture; but until he can command the seasons, and determine their temperature and degree of moisture, he can do little towards procuring entire exemption from blight.

A WHEAT GROWER OF WESTERN NEW-YORK.

ICE-HOUSES AND THEIR CONSTRUCTION.

MESSRS. GAYLORD & TUCKER—There was a time, and that not long since, when the use of ice in summer was considered a mere luxury, but it has now become a matter of convenience and practical utility in the preservation of butter, meat, fish, and other articles of food, and in the preparation of refreshing drinks during the heat of summer. Hence we find that buildings as reservoirs of ice in warm weather, have become more common and are increasing in number; but there appears to be a diversity in the manner of constructing them, or a want of information as to the method of keeping out heat, or preventing the ice from melting. A few observations on the subject may not be amiss, and will be made in the hope that it may lead those who are about to provide themselves with an ice-house, to adopt the correct principle in its construction.

To preserve ice during the heat of summer, it must be protected from the influence of the air above, and the temperature of the earth around and beneath the building in which it is contained. This is done by interposing substances which are *non-conductors of heat*, between the ice and surrounding bodies. The building may be erected above or beneath the earth, to suit the convenience of the owner.

A body of ice in an ice-house, will gradually diminish by melting in summer, not only from atmospheric influence, but also from the heat of the earth around and beneath it. Hence it must be guarded by a *non-conductor* above and below, as well as on the sides.

An ice-house may be of any given dimensions or capacity, to suit the uses to which the contents are to be applied. For a private family in the country, a building ten feet square and ten feet deep, holding a cube of ice of those dimensions, will have a portion of it remaining when the frosts of autumn render its further use unnecessary until the ensuing season.

The substances which are most generally employed as *non-conductors* in lining ice-houses, are *charcoal, tanner's bark, limbs of cedar and pine trees, hay, straw and chaff* of wheat, rye, barley, oats or rice. Wool, feathers and hair, belong to this class of bodies, but they are too expensive to be applied to such a purpose.

Those who have constructed ice-houses without the use of the abovementioned *non-conductors*, or as they may be more correctly named, *slow conductors of heat*, have been disappointed in preserving ice through the summer in the latitudes of 40° and 41° north, as the following examples will show:

1. A farmer, for instance, built an ice-house under ground with a wooden frame, and planked the outside to keep the ice from coming in contact with the earth. He threw some straw in the bottom and filled it with ice, but before the month of July it was entirely melted.

2. Another person planked both sides of a wooden frame under ground, leaving an empty space of eight or ten inches all around the ice, supposing that such a barrier of cold air between the earth and ice, would prevent it from melting, but it was all gone in July.*

3. An ice-house, twelve or fourteen feet square, partly under ground, on a side hill, with a northern exposure, having hollow walls and a plank floor some inches above the bottom, was filled with ice, and the ice covered with straw, but it disappeared in August, when it was most in demand.

4. A circular ice-house under ground, ten feet deep, and as many in diameter, built of stone, would not preserve ice through the summer.

5. A farmer desirous of rendering his ice-house doubly useful, had a milk room constructed over it, but the floor confined the air under it, and over the ice, and caused such an accumulation of heat, that the ice was soon melted, and neither object was obtained.

From these examples it may be seen that something more is wanting to preserve ice in summer, than a cavity beneath the surface. This will be rendered more evident when we ascertain the average temperature of the earth in warm weather, and find that it exceeds by eighteen or twenty degrees the freezing point, on the scale of Farenheit's thermometer. We are enabled to do this by referring to the late Dr. Mitchell's "Experiments on the temperature of spring water near New-York," as related in the New-York Medical Repository, vol. VII, p. 414:

"On the 13th, 14th, and 15th days of August, 1803, Doct. Mitchill made many experiments on the temperature of water gushing from the interior parts of the earth in the neighborhood of Plandome, on Long Island, in the latitude of about 40°, 45', N."

"The coldest springs that could be found, were of the temperature of 54°. And this was the exact heat of water fresh drawn from a well of thirty feet in depth, partly shaded from the sun, and situated in a slope facing the north. In all these experiments the elevation was but a few feet above the level of the ocean."

"These heats correspond very nearly with the temperature of the cave of the Observatory of Paris, ninety feet under ground, which has an invariable point of 53 degrees, and of the deep cave in England, of which Mr. Boyle writes, which was of the same warmth."

"Mr. Kirwan, in his *estimate of the temperature of different latitudes*, has calculated that the temperature of Cambridge, lat. 42°, 25', in Massachusetts, was 50°, 3'; and of Ipswich, lat. 42°, 38', in the same state, was 50°, 17'. These temperatures he computes to be ten degrees, or a little more, below the European standard. From an obserbation of Kalm, on the heat of water from a deep well, in lat. 42°, between New-York and Albany, it would appear that the heat of water thereabout was 49°. This is five degrees colder than the temperature on Long Island, and eleven lower than the same latitude in Europe. The heat of water from the deepest wells near Philadelphia, lat. 39°, 56', is stated to be 52°, 5'; that is a degree and a half colder than at New-York, and about ten degrees cooler than Europe. This is probably owing to its greater distance from the ocean."

As in the construction of ice-houses, the warmth of the earth is to be guarded against, we may add later testimony than that of Dr. Mitchill, but corroborating his views. Harper's Family Library, (No. XIV,) contains a volume on the "Polar Seas and Regions," and in the first chapter on "the climate of the Polar regions," p. 15, we quote as follows:

"Copious springs which percolate the bowels of the earth, and rapidly convey the impressions of subterranean heat to the surface, will consequently furnish the most accurate reports of the natural register of climate. These, if rightly chosen, differ not sensibly in their temperature at all seasons, and whether they have their seat at a depth of one hundred or of five hundred feet, they affect the thermometer alike."

To this quotation is appended the following note:

"The celebrated fountain of Vaucluse, situate in the latitude of 43°, 55', and 360 feet above the level of the Mediterranean sea, has been observed to acquire its highest temperature about the first day of September, and to reach the lowest at the beginning of April; the former being 56°, 3', and the latter 54°, 1', by Farenheit's scale; which gives 55°, 2', for its mean heat."

From the facts contained in the foregoing extracts, it will be observed that in the neighborhood of New-York, the temperature of spring and well water in summer, is 54 degrees of Farenheit's thermometer, and consequently the earth beneath the surface, and beyond the reach of the direct rays of the sun, has the same temperature, which is 22 degrees above the freezing point. This degree of heat will rapidly melt ice in any cavity, cellar or ice-house, where it comes in contact with the earth, air, wood, or stone, through which the heat is conveyed. Ice cannot therefore be preserved in a reservoir lined with wood or stone. It might be thought that the ice would impart its frigidity to the stone or earth surrounding it, and thereby be preserved from melting, but the paramount heat of 54 degrees will penetrate on all sides, and from the bottom, and reduce it to a fluid state. The melted ice soon absorbs heat, and rises to summer temperature of the earth, and adds more power to melt the congealed mass.

The heat of the earth south of New-York, may be something higher than 54 degrees, requiring greater precautions in guarding ice-houses from the intrusion of warmth. Farther north or inland from the sea coast, it may be less, as in latitude 42° on the Hudson river, it is 49°, which is seventeen degrees above freezing, and sufficiently warm to be capable of melting ice. We must calculate also, that in summer the heat penetrates the surface of the earth from two to three feet, or as deep as the frosts of winter penetrate. Hence the layer of ice near the surface, in an ice-house, is subjected to a greater degree of heat than 54, from the upper surface of the earth around it.

In constructing an ice-house, therefore, these data must be kept in view. If it be built under ground, it must have a sandy bottom to absorb the water which settles from the melted ice, for after all the precautions taken, a portion will become liquid. If the bottom be a hard-pan, or clay, or any kind of soil retentive of water, there must be a drain to carry off the ice that melts. The same precautions must be taken as to the bottom, if built above ground. Neither should have a plank or tight wooden floor. Pieces of timber should be laid on the ground, and cross pieces or rails over them, so as to be raised ten or twelve inches from the earth. On these rails are to be placed some non-conducting substance from four to six inches thick. Small limbs of pine or cedar trees, or any kind of straw, are adapted to this purpose.

The frame timbers of an ice-house under ground, should be large enough to allow of hollow walls from eight to twelve inches thick, which should be filled with charcoal, tanner's bark, straw, or chaff, whichever may be most easily or cheaply obtained. Charcoal is here too much in demand for other purposes, and too expensive. In those parts of the country where there are tanneries, spent tanner's bark may be easily and cheaply obtained, but it should be dry before it be introduced into the hollow walls of an ice-house. In all parts of the country, straw is most readily procured, and at the least expense. In the southern states, rice chaff is plentiful and cheap, and well adapted to the purpose.

An under ground ice-house is most usually raised two or three feet above the surface, and banked up with earth, sloping from the building to carry off the water descending from the roof in rainy weather. If not on a northern slope or exposure, it should be where there is a free circulation of air, or under the shade of a tree. The roof may be thatched with rye straw, as one of the best materials to prevent the heat of the sun from penetrating into the building. On the sea coast, the long salt grass called *sedge*, may be substituted, and in the interior and western states, the *tall prairie grass* will answer the same purpose. If there be a board or shingle roof, it should be *covered with tin*, or be *painted white*, or be *whitewashed with lime*, that the heat and rays of the sun may be reflected from it by the white surface, and not penetrate the roof.

As there must be an entrance, it should be on the northerly side, and as it will necessarily be opened to procure the daily supply of ice in summer, heat from the surrounding atmosphere will consequently be admitted notwithstanding the utmost precautions, and this heat being confined when the door is shut will rapidly melt the ice. Hence to obviate this difficulty, there should be small openings at opposite ends, that the air may draw through and diminish the heat over the ice. A small wooden chimney or ventilator, in addition, would still further protect the ice from melting. The chimney should have a cap to shed the falling rain. These are small affairs, but necessary, since in all undertakings the details must be understood, and carried out in practice, to insure success.

In the southern states, where the ground is low, and where the heat of summer is greater and longer continued than it is here, an ice-house would be more advantageously constructed above ground, on a side hill, where it can have an under ground drain, with a cool and shady exposure. There, or in any other part of the country, it may be built of rough timber, like a log house, made double, with a space of eighteen or twenty inches between the walls. This space to be filled with dry straw, rice chaff, or dry tanner's bark, packed down with the feet or a pounder. The space between the cross logs should also be stuffed with straw.

A layer of sand or gravel, eight or ten inches thick, should cover the bottom of an ice-house above ground. On the sand, place any rough pieces of timber, and cross them with others, that they may be raised ten or twelve inches above the sandy bottom. Then make a layer of pine or cedar limbs, and smooth off with straw, upon which the ice may be laid. Roof the building with rye straw or long grass, and dig a trench on the sides to carry off the falling rain water.

An ice-house above ground, should be larger than one under ground, as the heat of the atmosphere whatever it may be, in any given place, is greater than the temperature of the earth eight or ten feet beneath the surface. The greater the bulk of the cold body, the longer it will be before the heat above or below the surface, penetrates it. An ice-house on the surface, should also have thicker walls, and a greater body of straw, tan, or other slow conductor of heat, between the ice and external air. Hence such a building should not be less than eighteen or twenty feet square on the ground, and the body of ice within it, ten or twelve feet thick. The upper surface in all ice-houses, should also be covered with straw.

In filling an ice-house during the winter, the cakes should be laid close, and the crevices filled with snow or pounded ice, to exclude air as much as possible. Sometimes ice is porous and filled with small air holes, which with returning summer enlarge by expansion of the air within, and become cavities of water. That these may burst and the water exude before the quantity becomes large, it is thought to be advisable by some, to set the cakes on their edges. At the end of a day's labor in filling an ice-house, clean water may be thrown on the surface, which, freezing, helps to fill up the crevices in the ice, and to make it a compact body.

The foregoing remarks and directions will enable any discreet person to construct or build an ice-house in any part of the country where desirable, that will hold ice through the summer. The writer had one built under ground, on Staten Island, in 1840, about ten feet square, which held ice during the summer of 1841. It was roofed with boards and whitewashed. The labor and materials in constructing it, cost about twenty dollars. The winter of 1841-2, was so mild in this region, that ice could not be procured to fill it. RICHMOND.

Oakland Farm, Staten Island, March 20, 1843.

P. S. In my communication to Solon Robinson, in the March No. of the Cultivator, page 50, the latitude of my residence was given to show that it was nearly in the same parallel with Lake county, in Indiana, where your valuable correspondent resides, and that the difference in *farming, east and west*, did not arise from difference of latitude. In the printed letter there is an error of ten degrees, arising from a typographical error, or a mistake in copying the manuscript. It should have been lat. 40°, 30', N.

In the February No., your correspondent Wm. Partridge, has called attention to the cultivation of the swamp willow, which is successfully raised in Richmond county. As the season advances, and I can have an opportunity to visit the owner of the plantation of willows, you may expect some information on the subject for a future number of your highly useful periodical. At present, the roads are blocked up with snow drifts from the late equinoctial storm, and unusual occurrence in these parts at this time of the year. R.

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* "Air is better fitted for diffusing than storing up heat."—*Polar Seas and Regions. No. XIV. of Harper's Family Library, page* 16.

BREEDING OF ANIMALS—PEDIGREE, &c.

We have received from a correspondent who signs himself "A Young Farmer," of Virginia, a communication of several sheets, on the subjects indicated above. While in many things we agree perfectly with the opinions expressed by the writer, there are others from which we as decidedly dissent, and which more experience and reflection will doubtless enable him to correct. As the length of the essay renders its insertion entire impracticable, we have concluded to give the substance of it in extracts, omitting those portions irrelevant to the subject, or which might be considered personal by others, and perhaps adding a few remarks of our own at the close.

After a few introductory paragraphs, giving a brief review of the financial condition of the country, and urging the necessity of examining the causes that have led to this state of things, as well as enforcing the duty of economy in management, and improvement in all the departments of agriculture, the writer goes on to say:

"I am a young farmer, and have for a few years bred Short Horns on a small scale, and write now with the view of having more light and information on the breeding of stock, rather than with the view of intruding my own opinions. From the remarks of some of your correspondents, and occasionally editorials, it appears to me a beginner has poor encouragement in trying to improve his stock. One writer asserts that if we begin with the common breed of cattle we shall never succeed in effecting improvement to any extent, and another that if we were to take the best common stock, and the best Short Horn bull, and breed for 20 years, we should be no nearer the object aimed at, than when we set out. If such is the fact, it affords poor consolation to those who in the laudable spirit of improvement, have been induced to give several hundred dollars for a Durham bull, since according to this theory, unless with the bull they have obtained the great secret or talisman of breeding, they may go on for 20 years, as an Irishman would say, without advancing a step."

The difficulty here, or the want of success which has attended the efforts of some breeders, our correspondent supposes to exist in the greater attention paid to pedigree than the real qualities of the animal, and illustrates his opinion by the following dialogue supposed to take place between a farmer who wishes to purchase stock, and a breeder, who has invited the farmer to pass through his yards and examine his improved stock:

"B. Here are some beautiful animals; just look at their pedigree; handle them, never mind their looks, walk around them, and tell me if you ever saw such a lot of animals: all Herd Book, selected with the greatest care from the finest herds in England, animals that have taken there the prizes for many years. *These* animals inherit *their* virtues they are *fixed*, and will descend to their offspring, for like will produce like."

"F. Well, but Mr. Breeder, stop; how is it with this bull here, of which the price is $1,000. You must admit he has a coarse head, is very hollow in the back, and is deficient in the rump; where does he get these defects, and will he not be apt to perpetuate them in his progeny, and carry them to his grave?"

"B. My dear sir, I see you are ignorant of the business of breeding; look at his pedigree. His grandsire the famous ———, was sold for one thousand pounds; I obtained the dam as a particular favor for $800, and was offered that sum for this very animal when he was a calf. Handle him; he is like satin. He is a superb bull; what an eye, what a fore arm, what a splendid brisket; all my cows are in calf by him, and you must permit me to say if you do not like him, you certainly do not know what you want."

"F. Excuse me, Mr. Breeder, I do not profess to know much about stock, and nothing about that Herd Book, though I have raised more or less stock for 40 years. I have a dairy of 60 cows, and hearing you had some fine animals, called to see them, and if possible to purchase a bull and two or three cows, to improve my own stock. But I am afraid your cows will not milk well, and indeed I do not like your bull. Have you no other stock, and at lower prices? Ah, yes; I see a fine large cow in the next yard, that the girl is milking, and what a pail of milk, some 30 quarts, and about to run over! Will you sell her?"

"B. Why sir, the stock in that yard are not my best stock, but only a few I retain to supply my family with milk and butter. I value them slightly since I have procured the improved stock. She is quiet, orderly, and a good breeder. Her two heifers stand in that corner, and the dairy woman says are nearly equal as milkers to their mother."

"F. I will give you $100 for the three; and if I can procure the sire of those heifers, I think I will dispense with the Herd Book and pedigree for the present."

"My object in this dialogue, is not to decry imported or improved cattle, but to enforce the opinion that cattle should be prized for their *intrinsic*, rather than *extrinsic* qualities. We have all known animals that would hardly be taken as a gift, command a high price solely on account of something written on a piece of paper, and called a pedigree, with high sounding names recorded in the Herd Book. We have known too, animals truly valuable, deep milkers, excellent feeders, condemned with a sneer solely on account of a black nose. Who has not known animals sell for $50, which if they had had pedigrees, would have brought $500? In old times, the proof of the pudding used to be in the eating; the proof of the cow in the pail; and that of the bullock inside of him. It is this question of real value in different breeds that requires examination. Farmers do not love to be led away by mere names; truth is what they need.

"If a number of eminent men, by giving their minds to the subject, and by careful selection and skillful breeding through a long course of years, have at last succeeded in *fastening* upon a stock certain excellencies of shape and of properties, which will be of course imparted to their progeny if they are unrivaled for the pail or the shambles, then it would be unreasonable to complain of the great outlay necessary to secure their advantages for our herds. The Short Horns, as a race, are no doubt entitled to their high reputation, as combining more valuable qualities than any other breed. These qualities are transmitted by the *pure bloods* to their issue, while that result would be uncertain from part blood. Now what is a pure blood Short Horn? To the improver of stock this is an important question. It must be admitted that the Durham is a made up breed; that is, one based on common stock and skillfully bred up to its present perfection. No one pretends, that as it exists at present, it is an original breed. A pure bred Short Horn, I suppose is one who has so many crosses in him, that the valuable qualities of the breed are permanent, and there is no danger of breeding back to the original ancestry; and to determine this point is said to be the great value of pedigree and the Herd Book. Now I want to know if an animal is coarse and ill made, how much better he is for having a pedigree, and being in the Herd Book? It appears to me from what little experience I have had, that in this case the pedigree detracts from, instead of adding to his value. Where did he get his bad points? Probably from some of his ancestors, for he is so pure bred that they cannot be traced to the common stock, and if so, does not the pedigree fasten the defects on him, and make it more than likely he will transmit them to his progeny? Is he not more likely to breed bad stock than a part bred bull would be, of better shape, if the latter were home raised, and bred with care and judgment? Are we not too apt to be satisfied with a pedigree, without considering that there is such a thing as a *good pedigree*, and such a thing as a *bad one?* * * *

"It will scarcely be denied by any man who is acquainted with the various importations of cattle from England within the last 10 or 15 years, that some of them with long tailed pedigrees, are not the exclusive possessors of great beauty and excellence; that neither Herd Book or pedigree is a certain test of superiority; that some have disgraced their owners and breeders, and in all probability only saved from the knife by their relation to English aristocracy. If an animal commands a high price, it ought to be because of some intrinsic excellence, some positive merit, some palpable superiority. Much is said of white and black noses, color, &c., but are these of any consequence any farther than they represent or indicate quality or merit? So pedigree, I maintain, has no value in itself, unless accompanied with something better. * * * * * * *

"I very much fear that in some instances in which high prices have been paid for Short Horns, we have been paying not for the animal, but for the pedigree, which when paid for, was often worth but little. I cannot help thinking that in this Short Horn excitement, there is something of the tulip mania in Holland, or the multicaulis fever of our own country. May I not venture to predict that similar results will ensue with the first as with the last; indeed it is not perhaps too much to say that in this country, high blown pedigrees, and $500 animals, are sleeping "that sleep that knows no waking." It may be said, that in England prices are nearly as high for the improved Short Horns as at their first introduction, and that the demand for them is continually increasing and keeping up the price. It is enough to answer that *there* wealth is concentrated in a few, and labor performed by the many, and between these two classes there is a much wider and more distinct separation than in this country. *There* a monopoly of any favorite or fashionable breed is easily effected; *here* it would be impossible. There to buy an animal of Lord A., the celebrated Earl of B., or the noble Duke of C., gives both buyer and beast no little eclat, and the name of the breeder covers a multitude of sins. Here we are such good republicans, that we care but little whether we purchase of a rich or poor man, provided the animals please us. Prices are, and must be regulated by the facility of supply and extent of demand. The ground work or basis of the one can be easily come at; the latter will depend ultimately on the actual and intrinsic worth. In carving into a juicy sirloin, or in tasting butter, we care nothing for pedigree, or for native or imported cattle. The butcher and the dairy maid must be the judges at last of the value of breeds, and a decision built up against their verdict must in the end come to nothing.

"The result of my own observations is, that with some exceptions, as a dairy stock, the Short Horns are more valuable for the *purpose of crossing*, than for their own capacity for milk and butter. Their *history* shows that these were lost sight of by the early breeders, in their endeavors to obtain other desiderata, large size, early maturity, combined with neatness of form, and facility of fattening. That they possess these in an eminent degree, no one can doubt; and that certain families of them are good milkers, and at the same time retain *some* of these valuable qualities of the breed, my own experience has satisfied me. I believe milk can be bred into them, by the exercise of care and skill, but where this is the case, some of the points otherwise desirable, must be sacrificed. Among my full bred Durhams are some extraordinary milkers, but they were purchased for me under directions to pay attention to this quality particularly, and to consider all other points as secondary, and they would probably be condemned by the professional amateur. Every person knows there is an inconsistency in supposing that the easy taking on flesh, barrel shaped, square, heavy thighed Durham, can be a deep milker. Can we expect a deep milker without a capacious udder, and is there room between the thighs of the thick fleshed Durham to carry such a bag? My opinion then is, that the Durhams as a breed are not milkers, and that the exceptions only go to prove the rule. To say that it will not do to cross the Durham with our common stock, appears to me preposterous, and is contradicted by experience already. If we live in a dairy district, let us purchase the best common stock, deep milkers, that we can find. Select a pure bred Durham bull, if possible, descended from a milking dam, or procure a bull whose offspring have already proved to be milkers. Let us be content with a flatter rib and lighter thigh, and be satisfied if we can engraft on the progeny the early maturity and neat form of the Durham, with the milking properties of the dam. * * * * * * * *

"One of the improved methods of judging animals, of recent introduction at least in this country, is the point called *handling*. This is defined to be a certain indefinable, peculiar, soft, delicate, fine, elastic touch or feeling of the cellular membrane, indicating great excellence. It is now admitted to be the most important and essential of all criteria of judgment, and however well shaped and promising an animal may be in other respects, if he is deficient in this point, it is the "unpardonable sin." I have known experienced breeders pass by with contempt the most faultless shape, after merely touching them in one or two places with their fingers. It is openly avowed that daylight is not necessary to view stock, feeling being substituted for seeing. As I am a young farmer, and anxious to be informed on all matters relating to breeding stock, I have tried to be a *handler*, and to learn from older and wiser heads what *good handling* indicates. I am told by one, "that mellow handling shows a kind and easy feeder, that will mature early, and on a small consumption of food." If told that experience shows that there are many harsh handlers that both feed easy and mature early, we are answered "that good handling only indicates *better* feeders." But will the butcher pass by unnoticed, those fine animals with the beef placed on the most profitable points for cutting, to purchase those who have been bred solely with reference to handling? The answer is, he will find the latter to be the best inside, the flesh will be better mixed with the fat. And this introduces the question, whether the Short Horns are the best breed for beef. In the Smithfield market pure Short Horn beef is not ranked in the first class, it having too much muscle unmixed with fat. In this country, the butchers greatly prefer half or three quarter blood, that is, one or two crosses of Durham on the native stock. They have better proof; yield more tender and saleable meat; and the flesh is more intermixed or marbled with fat. The crosses too have generally outweighed the full breeds. The fine animals of Tonkins, in New Jersey, were not more than three-fourths Durham blood. A judicious selection of some of the best common stock crossed once or twice with the Short Horn bull, appears to make just such an animal as is wanted by the butcher, and one that will generally be preferred by him to the pure blood.

"Another breeder has urged upon me the importance of *handling* as an evidence of good milking properties; but I satisfied him there is no necessary connection between them, by showing him in my yard a couple of cows making nearly 30 lbs. of butter a week, who he said handled like buffaloes; and in another case, a superb handler, that could not raise her own calf. A third person has said that good handlers are of gentle disposition, quiet and tractable, which has been contradicted by my experience.

"What then is handling, what does it mean? If it would not be too presuming in a 'Young Farmer,' I should say, that in forming an opinion as to the beauty or excellence of an animal, there are many points to be looked at and considered, that these are balanced against each other, and since no animal is perfect, that one in which the greatest number of good points predominates, is the best, and that among these points handling is one; but I cannot consider it as every thing, or of more consequence than all others. An animal good in other respects, is not to be condemned for a rather heavy head, a too flat rib, or a defective rump, neither should they be for harsh handling alone.

"These remarks have been made more with the view of eliciting a correct understanding of the subject from those better able to give it than myself, more with a view to inquire than instruct. The things stated are such as appear to me would strike any one young and inexperienced; and I hope these apparent inconsistencies in determining the value of cattle, which have been noticed, may be susceptible of explanation. My only object is to promote the public benefit, and if the views here presented are correct, however it may affect the interests of other breeders, the effect will not fall lightly on the pocket of A Young Farmer."

We have but a single remark to make in this place, on the foregoing, and that is in reference to what he says as to our affording poor encouragement to efforts for improving our domestic animals, in our "occasional editorials." We must have been truly unfortunate in expressing ourselves, if we have said one word that could be construed into a discouragement of effort; for we are firm believers not only in the propriety, but in the practicability of further improvement in our domestic animals; and we are the advocates of the introduction and dissemination of the best foreign animals, of undisputed pedigree and Herd Book standing, because in such we have the most ready and certain means of improvement prepared at our hands. We like the improved Short Horns and Herefords, because the qualities for which they are deservedly famed, are invariably, so far as we have had an opportunity of observing, communicated to their progeny in a great degree, when crosses have taken place between them and the common stock of the country. We have deemed it unnecessary to undertake to produce from our native stock alone, by breeding and selection, a new breed, when we have ready at our hands animals in a farther state of advancement than we could expect to reach for years, with native stock as a starting point. Pedigree we prize as a proof that the good qualities are not accidental, but inherent and fixed; as enabling us to calculate in a great degree the result of any cross we may make in endeavoring to improve our stock. But we must dismiss the subject, inviting breeders to discuss the positions advanced by "A Young Farmer," and intending ourselves to return to it again in a short time.

SALT FOR STOCK—MEADOWS, &c.

Messrs. Editors—As the pasturing season is near, permit me to suggest the propriety of furnishing more salt for stock. Often in passing through the fields of our best farmers, the stock is so eager for salt as nearly to trample you down, and these men let it suffice to give salt once in six to ten days. Can stock thrive thus? Let each farmer furnish a trough, from 4 to 8 feet in length, as the stock may require, in each field; the trough to hold water in case of rain, that no salt be wasted. (The cattle will consume the water in the trough.) After salting them a little for three days, place the trough in the field in a suitable place, and keep it constantly supplied with salt, and let the animal decide how much and often it needs it to promote health. Need I say it adds to growth and fatness—let the farmer judge.

Manuring Meadows.—I see in the April No. information is wanted. I have a meadow on the flat land, rather moist to plow. Some eight years past, in consequence of having many laborers, this meadow was mown in July for two seasons. The third season I was surprised to find the grass much diminished in quantity; therefore deferred mowing it till the grass was matured; thus while curing it, some seed would fall as in former times, previous to the early cutting. In two or three years it was restored to its usual growth, which is about two tons per acre. I do not manure, nor plaster, nor water it. I turn in my fat cattle a few days in the fall, which is all it is pastured. My neighbors adjoining me, practice the old plan, stack the hay on the meadows, and feed it there. They say their meadows want manuring; their stock is grazing at every chance, and the result is they cut about 1½ tons per acre on as good land as mine; hence they are one season behind hand for fodder. Their stock feed off in winter what they should cut in summer; besides they have not that manure for the plow land. "*Judge ye which is best.*"

As this season is a tender time for cows, I would from experience recommend feeding milch cows with boiled oats—if not convenient, swell them with hot water; begin with two or three quarts, and increase the mess to ten or fourteen, as is consistent. It adds greatly to the quantity and quality of the milk, and vigor to the animal.

Dutchess Co., April 15, 1843. T. G. Wheeler.

WASHING SHEEP, &c.

Messrs. Editors—With your approbation, I will venture to intrude upon the public my method of washing sheep. I build my sheep yard by the shore of the lake, in such a manner as will be most convenient to catch the sheep in. The sheep having been tagged, (generally about the first of April,) some by the time for washing will begin to get dirty; it is therefore necessary that such should be tagged again. I have one man in the yard to catch and tag for two or three to wash. I have seen some so careless as to drag the sheep in the water on their backs, or any way to get them in. Such practice is very wrong, as well as a very hard way to handle sheep. The easiest way is to take the sheep up and carry it. By dragging a sheep into the water, the sand and gravel get into the wool, where much of it will remain, to the great annoyance of the shears when the sheep comes to be shorn, besides injuring the sale of the wool. The sheep should be caught by a man in the yard, carried to the edge of the water, and there held upon a bench or stool until the washer is ready to take it. The washer then carries the sheep into the water to a suitable depth to perform the operation; having squeezed the wool sufficiently in the water, he leads the sheep gently to the shore, and then finishes the operation by squeezing the water out of the wool as much as possible. In this I have a double purpose: first, if any filth remains in the wool after washing in the water, more can be squeezed out than will naturally drain out; and second, by squeezing the water from the wool, the sheep is relieved of a heavy burden which otherwise would cause it to tumble down in the mud, sand or gravel, in running off, which is often the case when let go with the water in the wool. In such cases they need to be taken up, carried into the water and washed again.

Now if the water is squeezed from the wool, the sheep may go away with much more ease than when loaded with water. In this way I have been able to cleanse my wool in such a manner that it suffers in comparison with no lot of wool that I have ever seen. I would farther state that the sheep should not be suffered to run upon plowed ground or among black logs and stumps after washing, until they are shorn.

In marking, docking, and castrating lambs, a cold day is to be preferred to a warm one, as in warm weather there is danger of bleeding too much: sometimes I have known them bleed to death. Tar cannot be too highly recommended with which to besmear sheep's noses after shearing. It should be repeated once or twice through the season. It prevents distempers, keeps off the maggot fly, and promotes the health of the sheep. I have sometimes given them tar, sulphur and salt, mixed and fed in troughs, with good success.

I was a little disappointed in not seeing more Merino sheep at your State Fair, last Sept. Perhaps it may in part be accounted for in this way. Those beautiful South Downs and noble Leicesters and Cotswolds, must in all probability take the place of the fine wooled sheep about the large market towns and upon the banks of the Hudson generally, where the growing of good mutton must be more profitable than growing wool exclusively; and leave the Merinoes to the back towns and interior. The Saxons present, were beautiful sheep, though not large. Other parts of your state, I presume, would have presented a better display of Merino sheep. If not, I shall petition to have the Green Mountain boys admitted to come down and compete with their brethren of the Empire State with their Merinoes, weighing 160 lbs., and shearing from 12 to 14 lbs. of fine clean wool. The exhibition of Durham and other neat stock, together with an almost innumerable variety of domestic articles, was worth the while of any lover of his country to travel a hundred miles to view. J. N. Smith.

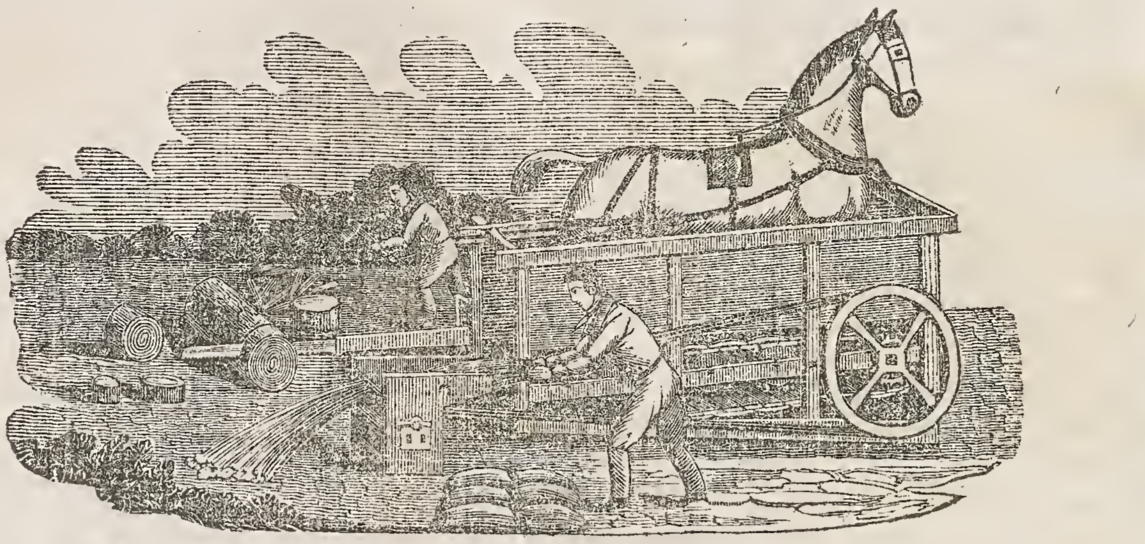
Chimney Point, Vt., April 19, 1843.

CULTURE OF WHEAT, PEAS, &c.

Messrs. Editors—"Commentator," in his remarks on the Jan. No. of the Cultivator, condemns the practice of "cultivating the same field two successive years in wheat," and he asserts that in every instance within his knowledge, "the second crop was vastly inferior to the first." It is no part of my design to advocate the cultivation of "wheat after wheat," as a desirable practice in *general,* or to doubt the correctness of his own observations, but to say that good crops have *sometimes* been obtained after the above method, scarcely inferior to the first, I will briefly relate my own experience. Some years since, I harvested and threshed from a field containing less than two and a half acres, 63 bushels of winter wheat. As it was a matter of convenience, and being withal a little curious to know the result of so wide a departure from what was generally thought correct farming, I prepared the ground in my usual manner, and put in for a second crop. In due time harvest came with a yield but one bushel less in amount than the first crop, and of excellent quality. Now for the rest of the story. A third crop was attempted from the same field. This was pressing the matter too far; less than half the first amount was obtained.

Culture of Peas.—This is a crop I have seldom attempted to raise, but from the experience of the last two years, am inclined to place a higher value on it than formerly. Having obtained a quantity of medium sized peas, (not marrowfats of course,) which were said to be very prolific, I made the trial as follows:—The ground a coarse gravel, or rather stony, in good heart, preceding crop oats, no manure for several years, plowed once, harrowed before sowing and both ways after, followed by the roller, seed sown at the rate of about four bushels per acre. Threshed as soon as gathered; produce 21 bushels; quantity of land sown fifty-five one-hundredths of an acre. This considerably exceeds the premium crop of George White, at the last Fair of the State Society.

Giving Credit, &c.—As a general rule the less a farmer has to do with giving or obtaining credit, the better. There is a wide difference between expending our income in advance, and after receiving it. But in one case credit should always be given,—that to which you allude in your last number—by acknowledging the source when articles are copied from other papers. By the way, neighbor E. remarked the other day in pleasantry, that I had not given *him* due credit in the brief account of my new watering place, as I but followed the example set by him. Very true, he was before me in this matter. Yours respectfully, G. Butler.



BADGER'S ONE HORSE POWER THRESHING MACHINE.—(Fig. 49.)

BADGER'S HORSE POWER THRESHING MACHINE.

(See Fig. 49.)

Messrs. Gaylord & Tucker—Herewith I send you a cut of O. Badger's One Horse Power, as manufactured by Hussey & Burgess, Auburn, N. Y., for insertion in the Cultivator. These powers are considered superior to any now in use. It has no chain proper, but is an endless floor, composed of a series of iron plates, held together and supported by strong wrought iron links, and revolving over strong cog wheels at each end, and supported above and below by two rows of cast iron friction wheels. This Power is small and compact; only two feet wide by ten and a half long, and can be easily carried in a common wagon. It will thresh from fifty to seventy-five bushels per day, with one horse and two hands, and with a change of horses will do much more. When applied to a circular saw, it will saw a cord of hard wood in fifteen minutes; and at a trifling expense can be made to work a cross cut saw to saw logs of the largest size. It is well adapted for driving any kind of machinery where a small power is required. (For price, &c. see advertisement in this paper.) Thos. R. Hussy.

Auburn, May 20, 1843.

LETTER FROM NOVA SCOTIA.

Messrs. Editors—The January and February Nos. of the Cultivator have come to hand, and are quite equal if not superior to my expectations.

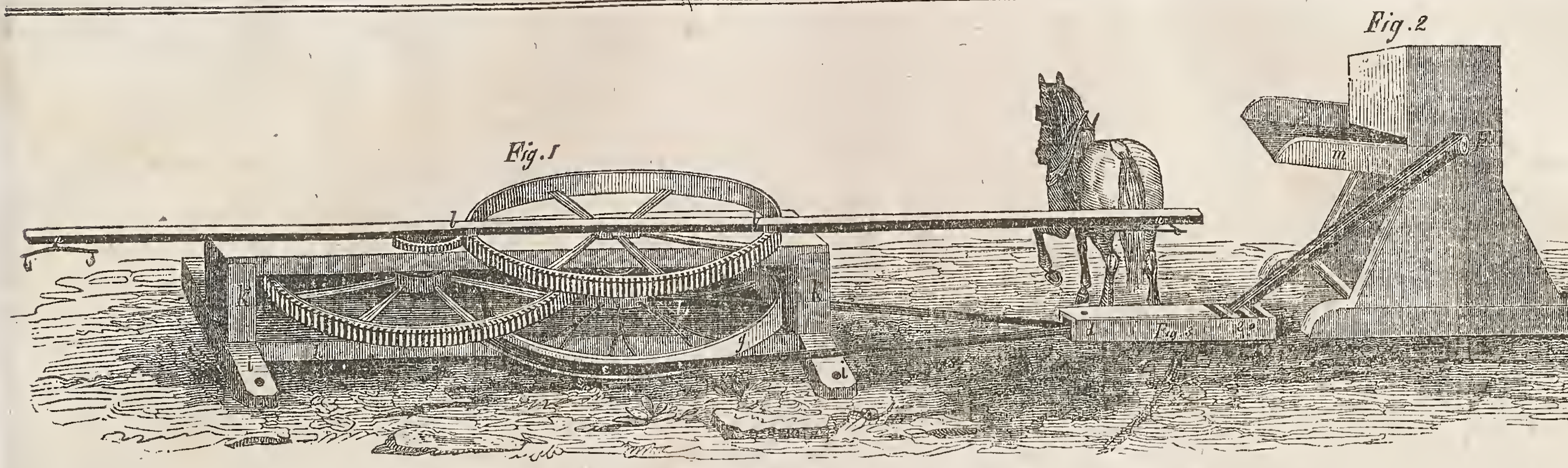
It really astonishes me, that men who pretend to farm it, should disregard or discourage so useful a paper, for it is the same to an agriculturist that a Medical Journal is to a physician, or a political paper is to the politician, &c. For what medical man would pretend to offer the best scientific advice, or operate agreeably to the latest improvements in surgery, if, after he left college, never read a new publication. And where is the politician who would rise in the legislative halls and discuss political economy, &c., without first making himself acquainted with the constitution of his country and the political intelligence of the day. Why, Messrs. Editors, he would be called a novice, and very justly; and what view must we take of a farmer who will plod along in some old beaten or worn out path, adhering to customs and superstitions long since thrown aside by the more learned and scientific of the present day.

Agricultural periodicals are, I conceive, greatly misunderstood by the farmers, for instead of their being devoted to the promulgation of wild theoretical notions, they contain real practical knowledge, obtained by theory and research, and that same kind of information that those ignorant men think they get from performing the practical operations of the farm, with this difference that the former is more correct. Few men, keeping in view their reputation, would hazard theory or attempt to erect a superstructure, without first testing it by analysis and practice.

With us, at the present time, there is much to condemn, and I regret to say but little to admire.

I know farmers who can never expect to fill any office of honor or emolument in the councils of the country, paying their four and five dollars for a paltry political paper, (Am. journals seem to aim more at the destruction of private character, than advance the public good,) half filled with advertisements of rum, merchandise, &c., and the other part written in a style only befitting a billingsgate scribbler, than pay *One Dollar* for a practical agricultural journal, containing all useful and necessary information upon the profession they follow, to obtain the good things of this world, for no man can have a greater variety than a scientific, practical, industrious, economical farmer. To show the state of our Province in this respect, I will just mention that in one of the most populous counties, and peculiarly an agricultural district, in 1840, about £200 was paid for political, religious and other journals, and at the same time only *three pounds* for agricultural information. The fact needs no comment; the absurdity is too plain not to be readily perceived. A better state of things now exists, but far behind what they should be. As I have filled my sheet, I will take another opportunity to write you the mode of farming in vogue with us, and point out some of its observations, and notice some recent improvements. Yours, &c.

Nova Scotia, Feb. 28, 1843. "Old Nova."



WARREN'S HORSE POWER AND THRESHING MACHINE.—(Fig. 50.)

WARREN'S HORSE POWER, &c.

Messrs. Editors—In consequence of the absence from the city of the former "exclusive agent" for "Warren's Patent Improved Horse Power and Threshing Machines," the notice respecting them by your correspondent in the January No. of your valuable paper, (W. R. P., Bowling Green, Wood co., O.,) did not come under his observation until his return last month; since which time a drawing of each machine has been made, for the purpose of enabling any one to understand a description.

The above drawing represents a Two Horse Power (fig. 1,) and Threshing Machine, (fig. 2,) and it will be observed that either one or two horses can be used. These machines are so constructed and adapted for each other by their gearing, that greater motion for the Thresher is obtained with less power than any we have ever known. The cylinder of the Thresher has wrought iron beaters, instead of spikes, placed into it secure and stationary; the concave is formed with wrought iron bars. The pulley (F.) of the Thresher is only 4 inches, and that of the Horse Power is 30 inches in diameter.

The revolutions of the Thresher are about 1500 per minute; allowing the horse to walk his circle at the rate of three times per minute, which is not much more than two miles per hour.

The power necessary to thresh thoroughly is greatly diminished inasmuch as the straw passes through with so great velocity and principally unbroken, that when properly fed, the speed of the Thresher is not materially affected, as spike machines must necessarily be in the act of breaking the straw.

It was a misfortune the last season, for lack of experience, to have made and sold several Horse Powers from patterns not sufficiently heavy, and consequently disappointment was caused in some cases; probably your correspondent from Virginia was one, mentioned by you in the April Cultivator; but whenever we have been duly apprised of such misfortune, it has been our pleasure to repair the injury.

Having therefore learned by experience, we caused new patterns to be made in the soonest possible time, and the machines made from them have given universal satisfaction; so that now no apprehension of difficulty need be felt, even if four horses should be attached to the lever, as might be required for purposes other than threshing.

In the last No. of the Cultivator, we observe your mention of a correspondent, (E. B. Princeton, Ill.) in reference to using "Warren's Horse Power" with "Hussey's Corn and Cob Crusher,"—and you are undoubtedly correct in saying they can be worked together. In the January No. of the Cultivator, a drawing and description of Hussey's machine may be seen. To give the required velocity, it is only necessary to alter the dimensions of the pulley of our Horse Power, which can be easily done whenever required.

The following statement, recently made by a gentleman in Pennsylvania, in a letter to his friend, is in strict accordance with numerous attestations which come to us by written communication as well as verbal, from those who speak from experience; and to be fully convinced of the correctness thereof, it would only be necessary for any one to see the machines in operation a few moments.

He writes, "He has the two in use," &c. and speaking of their advantages, &c. he says among them are, "leaving the straw in a great measure unbroken, and throwing the largest and heaviest grain farthest from the Thresher, thereby enabling the farmer to gather his *seed grain* without any extra labor or trouble," &c. He continues:—"*When the operator once becomes familiar with the proper mode of using the Thresher*, as much grain can be threshed in a day with the labor of two horses, a man and a boy, as is usually threshed by the ordinary machines, with four horses and six or eight hands." At the close, he recommends them as being "well adapted to the wants of farmers who do not have much assistance."

A letter from a gentleman in Virginia, just received, says—"Your machine got here entirely too late to be of any use to me this spring, consequently I was disappointed; for I had got out my oats, and had none remaining to try the machine with. However, as soon as I could get a band, I put it in successful operation, using rye, and it far exceeded my expectations in its performance; and if it will only get out wheat as well and as fast as it did rye, and that an inferior article, it will give universal satisfaction. The draft is easier than any machine I have ever seen." (See advertisement.)

Bostwick & Plant, 58 Water st.

New-York, May 15, 1843.

THE SILK BUSINESS.

The following communication is from the gentleman who exhibited the beautiful specimens of cocoons and reeled and manufactured silk, at the State Fair held in this city last autumn, and to whom was awarded most of the Society's prizes on those articles:

On Silk Worm Eggs.—The large Nankin colored peanut, from a healthy stock, there is no doubt on my mind, are worth for feeding much more than any other variety at present in this country.

I have fed them for two years in succession, and shall hereafter use no other kind, unless I greatly change my mind. The silk I believe to be equally good, and the cocoons reel quite as readily and well as the common peanut; there is less trouble in gathering the cocoons, handling, &c. I have been surprised that this variety has obtained no greater notoriety. They will most assuredly supersede all others when their true value shall come to be estimated.

Two years since, was the first of my feeding this kind for the purpose of ascertaining their value. I counted out 900 of such cocoons as had been laid aside for seed, which the millers did not perforate, being dead of course, the cocoons could not therefore have been of the best quality, yet they reeled 5 ounces of excellent silk. The same number of common peanut cocoons, selected from a good parcel, reeled 4 ounces; the same number of sulphur, selected, yielded the same, and the Italian white, same number selected, reeled very nearly the same amount.

According to this experiment, the Nankin colored silk worm produces one-fifth more silk than the other varieties, and what I have since had occasion to observe, fully confirms the truth of their superiority. The silk growers might therefore better purchase this description of eggs at five or even ten dollars per ounce, for profitable feeding, than receive *most kinds that are being used as a gift*.

I know it is said that a bushel of common peanut cocoons will yield more reeled silk, and weigh more per bushel, than any other kind. Admit it; and good reason why. There are about 4,000 cocoons to the bushel; whereas the Nankin colored requires only about 2300 or 2400 to fill the bushel, and can be raised, picked and flossed, with little more than half the trouble and expense; 4,000 of the Nankin will yield over one-fifth more silk certainly: 4,000 sulphur worms will produde just about as much silk as the common peanut. 4,000 of the Nankin colored peanut will weigh more than any other kind I ever saw. The sulphur will weigh more than the common peanut, and is probably more healthy withal.

Shelves and Feeding.—The following directions for making shelves and feeding and managing silk worms, is believed, by an individual who has had several years of practical experience, to be of much importance to the silk grower. It has at least simplicity, cheapness and convenience to the operator, if not the health and productiveness of the insect for its recommendation.

The frames of the shelves should be six feet long, and from three to four broad; they may be made of common pine boards sawed into strips about 2½ inches wide; set the pieces of which the frames are to be made, up edgewise, halving the stuff at the ends which are to be joined together, and a nail driven into each piece will hold them sufficiently firm; mason's common lath should then be nailed across the bottom of the frame, from 2½ to 3 inches apart, and the shelf is ready for use. A common pine plank sawed through the middle both ways, will make four upright pieces, which should be placed in a row six feet apart, to suit the length of the building; one end of the uprights to be nailed firmly to the floor, and the other to a cross piece over head. Nail the cleets upon which the frames are to rest to the uprights, the first two feet from the floor, the others, sufficient in number for four or five tier of shelves, one above the other, from 15 to 18 inches apart; the latter distance is much to be preferred where there is sufficient room.

The frames may now be placed in their proper position between the uprights, resting upon the cleets, and a sufficient quantity of clean, straight straw, placed upon them to prevent the worms from falling through. Each of these frames will afford sufficient space for about 1,500 worms.

Mr. E. Morris, editor of the Silk Record, Burlington, N. T., an individual entitled to much credit for his praiseworthy efforts for the advancement of silk culture, was, I believe, the first in this country who recommended feeding upon open shelves, of his own invention, of which the above may perhaps be considered a modification. He directed the worms to be fed on papers placed on tables, boards, &c., until their last moulting, and then to be placed upon the straw shelves, where they were to be fed until they spun their cocoons. This I consider a great error. I would reccommend as a matter of great importance, that the papers holding the young worms be transferred to the shelves within a day or two from the time they are hatched, so that the air from below may have a chance to dry the litter and prevent it from becoming sour and moldy. This may be considered of vast importance to the health of the young worm, which if once deranged, there is little reason to believe will ever be restored.

The worms should be fed on papers placed upon the straw, until their last moulting; after which, the papers, together with the litter, should he cleared away, and the worms spread equally over the whole surface of the shelf. Removing the litter twice from worms fed according to the above directions, would be equivalent to removing it four if not six times in the ordinary way.

After the worms are prepared for spinning their cocoons, which would be readily observed by an experienced feeder, five bundles of straw, about 20 inches in length and 4 inches in diameter, tightly bound with twine near one end, may be placed on each shelf, the end nearest the band on the shelf below, while the other is widely spread against the bottom of the shelf above. These five sheaves will receive and accommodate all of the worms that may be disposed to spin for the first two or three days, and will not litter the shelves so as to prevent the free circulation of air, or interfere with the convenience of feeding the residue of the worms not yet disposed for winding. After about one-half of the worms have mounted, for the accommodation of the remainder, oak branches and other green bushes may be used to fill up the intermediate spaces between the bundles of straw, which will afford ample room for all to wind. About four days from the time the last have wound their cocoons, the whole may be gathered, the shelves removed, and the old straw cleared away, the cocoonery well swept, and the shelves replaced, ready for another crop.

It is a matter of some importance in preparing the shelves, to have the bottom shelf four feet wide, and the succeeding ones above, made narrower, so that worms falling from the shelf above, may lodge on the one below, a distance not likely to injure them. The top shelf should be about three feet in width.

David Palmer.

White Plains, Westchester co., N. Y.

REARING CALVES, &c.

Messrs. Gaylord & Tucker—I maintain that the way nature points out for animals, is the most proper for them. At any rate, if a calf sucks from a cow half that she gives, it benefits him more than though the same be fed to him. Of this I am positive. We generally take a cow that gives a good mess, and let two calves suck her, and they frequently get quite fat with this chance, seem to wean better, winter better, and make thriftier cattle than those we never let suck. Around the bars of the calf pasture, you can easily make a pen with four or five boards and a few stakes; stick the stakes one or two inches apart; put a pin through them for the board to rest on, so high that the calves can run under them. Let me use this pen, and you may use your stool, and I will feed ten calves my way, quicker and better than you would two the old way, by milking and feeding in a pail; and I think my cows would give the most milk too. A couple of calves striving to get more milk every time, I think would have a tendency to increase the quantity, or else nature has not provided for this emergency as she has for other ones.

The Swivel principle, on the end of a flail staff, works well when fixed in a workmanlike manner. Let the bolt go well into the staff, with one horse nail just below the ferule, and another near the end, crossing this at right angles; bolt and head large; wire large also, and smooth, so as to have the string last well, with but little play about the bolt. Hang the swingle up close, and perhaps you will think, like the fellow who tried mine after I had oiled it—I don't like it, said he. Why? Oh, it goes too easy. **Cephas.**

Hannibal, N. Y., 1843.

SHORT AND LONG PLOWS.

Messrs. Gaylord & Tucker—The Cultivator of 1841, pages 10 and 25, contains a long and interesting article, giving details of experiments made with plows both in this country and in England. Among the conclusions arrived at, it is stated that the shorter the working part of the plow, meaning that part which runs in the ground, the lighter will be the draft; one of the reasons of which is, it has less surface exposed to the friction of the earth; but that such plows must not be inferred to do the best work, lightness of draft being the only advantage gained. I think it may be made to appear that the work will be done best in one respect, if the plow is moderately short.

It is believed that two plows may be constructed, which, when driven at the same speed, shall turn the furrow equally well, and yet one may *pulverize* the soil better than the other. Of this my observations have convinced me, when using different kinds of plows; and it is a point which should not be overlooked in discussions upon the correct form of this implement. None will dispute that the degree of pulverization is affected by the velocity with which the earth is moved; for every farmer knows that the same plow when drawn by a team of brisk horses, will break the furrow slice to a much finer powder than if the work is done by a pair of moping cattle. In comparing the operation of different plows, it will be found, I apprehend, that with a given height and rear breadth to the working part, a difference in the length of the same will influence the degree of pulverization. Because an increase of length gives it a more acute form; and as it passes forward, a longer time will be occupied in elevating or moving the earth to a given height or distance; consequently, the furrow slice will be lifted and thrown, with a slower, gentler motion, than if the working part were shorter and more obtuse. This may be illustrated by comparison with a wedge. The more acute the form of the wedge, the more slowly does the wood separate in proportion to the distance driven. If the working part of the plow in one instance is four feet in length, and in another part but two feet, the height and rear breadth of both being the same, each must pass its whole length before the furrow slice will be separated to an equal space from its bed; in doing which, the longer plow will take double the time, so the earth will be moved with one half the velocity. A short plow, therefore, by giving the soil a brisker motion, is a more efficient pulverizer; and besides, its more obtuse form makes it better fitted to break the furrow slice in pieces, by bending it upwards and from the land with greater abruptness. Furthermore, the superior lightness of draft favors pulverization, by encouraging the team to travel at a quicker pace. It is also evident that the more rapidly the earth is moved; the less liable it is to adhere to the mold-board; which is a point of importance on some soils, and is a source of solicitude on the western prairies.

If these views be correct, a short plow is better for the land as well as the team. And if the imported premium plow with a working part *four* feet in length, mentioned in the Cultivator of 1841, page 63, is to be regarded as one of the most approved specimens of British skill, it must be conceded that the Americans have fairly beaten their brethren on the other side of the water, in approximating the right form of the most indispensable of all farming implements. **A. R. M'Cord.**

La Grange, Dutchess co. N. Y., April 19, 1843.

DAIRY COWS.

Messrs. Gaylord & Tucker—When I gave you a brief and verbal statement of what my Herefords were doing in milking, I did not tell you that they were all three year olds but two, one of those four, and the other seven. Nor did I say on what food they were living.

When my cows first came into winter quarters, (which was between the fifteenth and twentieth of November,) they were in *good store condition*, and nothing more. I commenced feeding them on rye straw and about a half bushel of swedish turneps per day, until within a fortnight of calving, when I put them in a loose place to calve, gave them hay, and put the rye straw under them. (I purchased this straw at ten shillings per hundred bundles.) The second day I took the calves from them and sent them back to their stalls; fed them until this day on the same quantity of turneps as before; cut their hay into chaff, and added a little oatmeal.

I do not believe that meal of any description, given in the raw and dry state, is at all adapted for milking; therefore I am perfectly satisfied I have not done justice to them. Nor have I taken *all* the cream from the milk as I should have done, had I not fed my calves from it, to contend against Short Horns that have had new milk.

These things have to be taken into consideration, which every practical man will allow is a very great drawback on *butter making*.

Another thing, which is of still more importance. This is my first season of entering on the farm; all the hay that I grew was upon six acres, and that an inferior crop, grown on an impoverished soil. I had to feed fifty-three head of cattle, four horses, and one hundred and fifteen Cotswold sheep; therefore you may well suppose I had a great deal of provender to purchase. I went to the hay market to try to find some that had been cut young and green, but not a load could I procure; therefore I was obliged to content myself with feeding old cut hay, as dry as barley chaff, and if much butter can be made from such feed, I will pay a good premium to discover the secret. I am no advocate for *high* keeping, but this winter I have kept my cattle and sheep too low; there is a medium in all things.

Notwithstanding all this, you shall know at the end of the year what they do, and that *truly;* but it will not be any criterion what they *can do* with *proper treatment*, which they shall have another season. If they do not deserve credit, I do not ask it. All the *puffs and exaltations in the world, from a pen,* will have no avail if the "*breed*" cannot speak for themselves and sustain it.

I thank Mr. Norton for his kind wishes for my success, and glory in seeing the statement he has made; it is a good yield for cows *of any breed.* I want to see the Short Horn dairymen *come up to the mark.*

But the *milk story* is not all that is required in cattle. I think the yoke and the shambles of more importance. When the *best quality* of beef can be sold in market, at seven cents per pound, and a cow will lay on three pounds of beef while she is making one pound of butter on the same feed, (or probably more,) and with less trouble and expense. And if a breed of cattle can be produced that will combine quality of beef fed on less food than any other, the most active working oxen, *and can contend against any other breed* for milking, I say give me that breed. I am willing to "*stand a brush*" with the Herefords, without "*bravado.*"

Yours sincerely, **W. H. Sotham.**

Hereford Hall, near Albany, May 8, 1843.

TO THE STOCK BREEDERS OF THE STATE OF NEW-YORK, OR ELSEWHERE.

I will enter for a Sweepstakes, ten dollars entry, a three quarter bred Short Horn Steer, 5 years old in May, 1843, fed while a calf on skimmed milk, and poorly at that; and after three months old, with nothing but grass and hay till three years old; and since then wintered on straw, with common pasture in summer. He has never been fed a bushel of grain or roots, and has run out doors. I will show him against any animal of *common* breed, at the State Fair in Rochester, in September next, to *prove* that *grade* Short Horns will bear hardship and rough keep equal to the native cattle, and retain their superiority of points. He was sired by a thorough bred Short Horn bull.

I will also show a two years old thorough bred Short Horn Heifer, kept in the same manner, except sucking her dam for four months, which run out in the straw yard through the late severe and long winter, against any *native* heifer of like age, (two years old, June. 1843,) and for the same sum. Both animals to be judged by one the Cattle committees selected by the Society.

Lewis F. Allen.

Black Rock, May 6, 1843.

P. S. Any person wishing to compete with me in this challenge, will send notice to Luther Tucker, Esq. Secretary of the Society, Albany. It is understood that no animal thus exhibited, is to be fed any thing but grass in good pasture. Will the several agricultural papers in of the state, please copy the above.

BOMMER'S MANURE.

A Committee, consisting of Elias Hubbard, Esq. of Flatbush, F. L. Wyckoff of New Lotts, Michael Stryker of Flatlands, Henry S. Ditmas of Flatbush, and Johannes Lott, Jr. of Flatlands, appointed from a large company of farmers, assembled to examine Mr. G. Bommer's method for making manure by fermentation, on the premises of Garret Kouwenhoven, Esq. Flatlands, Long Island, respectfully report,

That after careful examination of a heap laid up on the 19th of April, and opened this afternoon, 3d of May, they most cheerfully acknowledge that the change produced upon the material used, far exceeded the most sanguine expectations, said materials consisting of straw, salt hay, &c. and presenting when opened, the appearance and smell of rich manure.

The committee farther report, that they also examined the book containing Mr. B.'s method, and are fully persuaded that the various ingredients used are all in themselves beneficial, and in their combination must produce the most favorable results. The committee most cordially commend the above method to the serious consideration of the farmers of Long Island. Signed by order of committee. **Elias Hubbard**, *Ch'n.*

Flatlands, May 3, 1843.

LICE ON POULTRY.

Messrs. Editors—I have seen a number of receipts in the Cultivator lately, for destroying hen lice. Any person that will try oil cake meal, according to the direction in one of the back numbers of the Cultivator, I think will not be troubled with them. I had a hen house last season, about 12 feet square, in which I kept 60 hens, the most of the time shut up, and the lice became so thick that I could not go into it without being almost covered with them. I took two quarts of oil meal, and sowed it with my hand, throwing it all about the house and nests, also up against the rafters and sides of the building, and I was not troubled with them afterwards. I used six quarts in the course of the summer—two quarts at each time—but I do not know but once would have answered, as I saw no lice after the first time I used it, and I did not clean out the house or nest in the whole summer, which should be done two or three times.

Poughkeepsie, April 18, 1843. **A Subscriber.**

Veterinary Department.

DISEASES OF HOGS.

"Editors of the Cultivator—I wish some information in regard to a disease which has injured swine very much in this district of country. It attacks pigs of four to twelve weeks old, weaned or suckling. The symptoms are, a dropsical appearance of body, bloated, hams and shoulders wasted, dry cough, staring coat, &c. My pigs are part Berkshires from the Windsor Castle stock, and part Woburns from Dr. Martin's, Kentucky. They live in a five acre grass lot, sleep about the barn and in sheds, food altogether dry corn, and waste from cattle feeding. I use wheat straw for bedding all my stock. Perhaps some of your correspondents will be kind enough to enlighten me on the following questions. Is stable litter injurious to hogs or pigs? Is any kind of straw injurious to hogs at large, whether wet or dry? Will hogs put on *flesh* fastest and grow largest, confined or at large, if fed what they will eat? Will they *grow* as well fed on dry raw corn unsparingly as on any other food, economy aside? Is it as well to have sows fat at farrowing, provided you guard the pigs from smothering? Is oak or walnut saw-dust good to put on the ground floor of a stable? **Isaac Hinckley.**"

Audubon, Ill., April, 1843.

We hope some of our subscribers who may be acquainted with the disease of pigs noticed by Mr. H., will respond to his inquiry, and that also his closing queries may receive attention. Stable litter we have never found injurious to hogs, unless when accumulated in such masses as to heat. In that case hogs should never have their beds in it. Hogs should not have their beds under stables where they are liable to be wet with the urine, or the straw saturated with it. We have known bad results ensue from this cause. We have never known disease as the result of using any kind of straw. Hogs will grow largest, but not fat fastest, if allowed to run at large. From the researches of Sprengel and others, it would seem that corn will make *fat* faster than almost any other food, but *flesh* or muscle not so fast as some others therefore fed on corn alone hogs would not *grow* as fast as if other food were used. Experience proves that sows when too fat, do not succeed well as breeders, independent of the danger of smothering their young. We can conceive no objection to the use of saw-dust from the woods named by Mr. H.; on the contrary we think that great advantages result from the use of all saw-dust for littering stables.

BREAKING COLTS.

Somebody has said, "there is no man wholly evil," and we are inclined to the opinion there is no animal wholly or irreclaimably vicious. Many are made nearly so by injudicious or brutal treatment, and the consequence of our own misconduct is charged upon the beast as instinctive or natural. The great secret in the management of all animals is gentleness; love, in this case at least, is more powerful than fear; and the animal soon learns that docility and submission go not unrewarded. Read, in Burkhardt or La Martine, the manner in which the Arabs treat their horses, rearing them among their children, and frequently dividing their last barley cake with them, and we cannot wonder that there are no vicious and unmanageable horses among them. The mares and foals not unfrequently occupy a part of the same tent with the family, and the children climb upon and fondle them without fear or injury. The affection and attachment between the Arab and his horse, is reciprocal; the animal meets him with a neigh of pleasure, and bows his head to receive the expected caress. And throughout the country, it will be found that the man who treats his horses and other animals with the most kindness and attention, has them most docile and manageable, and the most free from vicious propensities. The following, which we copy from a communication in the Union Agriculturist, written by Mr. Churchill, will better illustrate the effect of this law of kindness than any remarks of ours:

"My father, while I was young, kept a number of mares for raising colts, among which were two which we called pretty high strung; and the colts in that respect were generally after the mares. One in particular, after injuring two or three men in the neighborhood by throwing them, he sold to a horse dealer, who took it to Hartford, Conn., where it killed one negro, and nearly killed another in the same way, both noted for sticking to a horse's back. After these accidents, the driver sold the colt to go to the West Indies, where, as he said, there were plenty of negroes to kill. Having another colt of the same stock to break, my father was concluding to take strong measures to effect his object.

"I proposed trying more gentle means; told him that he had had his smart riders, that could jump from the ground on to the back of a wild colt without touching a hand, and get thrown as quick. 'Give me Dowd,' said I, (a young man equally as clumsy as myself, but cautious, cool, and withal kind to animals,) 'and the colt, and we will try what we can do.' After laughing at us to his satisfaction, and some importunity on my part, he consented.

"We took the colt into a smooth pasture, where it was familiar with every object, and led him around the pasture very gently; then, when standing, Dowd put his left arm over the colt's back, and let it feel some of his weight; stood a few minutes in that position, the colt quite uneasy at first, but soon became pacified by kind treatment. I then took hold of Dowd's ancle, when his foot was raised, and assisted him to place himself across the back of the colt. After remaining in this position some five or six minutes, he then gradually put his right leg over, and raised himself to a perpendicular position.

"We let the colt stand thus till it showed a disposition to walk forward. At first, it would take but one or two steps, but soon found that it could move with a man upon its back. In one hour's time, Dowd rode the colt to the house without difficulty. During the whole time, we were careful to treat the colt kindly; to make no sudden or quick motions to frighten it; and by all means not to vex it. This colt, though extremely spirited, proved a safe animal to ride. So much, we said, on our return to the house, for kind treatment; and so much I have found to be correct since in breaking colts, steers, or heifers. If an animal shows a disposition to fight, it must be conquered; after this is done effectually, kind treatment is the best."

The Garden and the Orchard.

THE PEACH TREE.

From Mr. Downing's new Catalogue, we select the following "Remarks," which he has attached to his list of Peaches. They should receive the attention of every grower of this delicious fruit:

"For beauty and delicious flavor, the Peach is acknowledged to be unsurpassed by any other fruit. Until within a few years its culture has been of the easiest and simplest kind in all parts of the Union south of the 43° of latitude. The most abundant crops were every where obtained in common orchards, and so congenial is the climate of the Middle States, that the finest seedling varieties were frequently seen springing up by the road sides and in the smallest cottage gardens. Of late years, owing to the appearance of *two diseases* in our orchards, the Peach has become comparatively short-lived and unproductive. These diseases are yet scarcely at all understood by the majority of cultivators. We therefore offer the following suggestions, with the knowledge, *that if appreciated and carried into practice, this fruit will be found as healthy, fine and productive in our gardens now, as at any previous period.*

"I. The Yellows is the greatest malady of the Peach. It affects the whole tree, and the seedlings reared from it are also more or less diseased in the same manner.

"II. The *Yellows* is a *contagious* disease, spreading from tree to tree gradually, and it may be propagated by grafting or budding from the infected specimens.

"III. This malady may be infallibly known by the following characteristics: a decidedly *yellowish color in the whole of the leaves* of the tree; *short and slender branches* growing here and there, *clothed with small, half-starved narrow leaves*, one-fourth or one-half the usual size; and mottled, small fruit of inferior quality ripening before the proper season.

"IV. A single tree with this disease will, by its contagious influence, gradually destroy a whole orchard of healthy trees. No pruning or mode of treatment, hitherto discovered, will restore to a healthy state a tree thoroughly diseased with the Yellows.

"V. It is absolutely necessary to *destroy all trees having the Yellows*, in order to insure a sound condition in a young plantation yet healthy. In small gardens, where there are diseased trees contiguous, the neighbors must be prevailed upon to enter into the plan; in farms, and larger places, it will generally be sufficient to destroy all victims of the Yellows on the premises, as the disease spreads slowly. In trees received from nurseries, there will frequently be found an infected subject, and it should be at once rooted up, and its place supplied by a healthy tree. It is much better to destroy a single tree, though young, at once, than by allowing it to stand, in the vain hope of its recovery, to spread disease among all in its neighborhood.

"If we direct our attention to this matter, we shall find in almost every neighborhood, a number of sickly and diseased trees, which, although worthless, are allowed still to occupy the ground. Very frequently an old and favorite tree, now *lean and jaundiced*, occupies, year after year, a corner of the garden, more from the recollection of the fine fruit it once bore, than from any present value. If we desire healthy and thriving Peach trees, all these diseased specimens, old or young, *must be entirely exterminated.* While these are allowed to stand in any garden disseminating a contagious disease on every side, it is idle to hope for healthy and long-lived trees.

"The second enemy to this tree, is the *Peach worm*, or borer. This insect (*Ægeria exitiosa*,) deposits its eggs in the soft part of the trunk, just at the surface of the ground. These, on becoming borers or grubs, perforate and consume the bark, and in time girdle and destroy the tree. To maintain an orchard in good health, so far as regards this insect, it is only necessary, every spring, to remove the earth for three or four inches at the base of the tree, and to cut out and destroy with the knife every one of the borers. Their presence is generally indicated by gum just below the surface of the ground, and a little practice will enable a man to go over an orchard of an acre in a day.

"The productiveness and longevity of the Peach tree, will be greatly promoted by shortening or pruning-in the extremities of the branches of bearing trees, from one to two feet in July, every year. This will keep the tree full of bearing buds and healthy wood."

INQUIRY—FRUIT TREES.

Messrs. Gaylord & Tucker—Can your friend Thomas, or any of our horticulturists, inform us of a sure and effectual way of preserving young fruit trees, during winter, from the outrageous depredations committed by the mice, which we call the meadow mole? We, in this section of country, sustain very many losses in consequence of these little depredators, which run about on the surface of the ground, under the snow, in the winter, and eat off the bark for several inches, so that all effort to save the tree is ineffectual. I prepared a small nursery last year, and in the summer inoculated with the choicest fruit; but scarcely a tree is now alive. During winter I stamped the snow about them, to prevent the mice from approaching them, but snow falling to an unusual depth, and drifting over them, they were soon out of my reach; and as the snow wasted away beneath, the little marauders spared *not a tree.*

Stamping the snow about them when it is but a few inches deep, is an effectual remedy; but is there nothing that may be put around the tree to repel them, which will not be detrimental to it? Has any one tried pure swine manure, placed around them; and has any one known mice to work in it, or under it? What effect would *tan bark* produce on the tree, and will the mice work in it? S. E. Todd.

Lansing, Tompkins co., N. Y., May, 1843.

DESTRUCTION OF CATERPILLARS.

Messrs. Gaylord & Tucker—Having been exceedingly annoyed for many years by the leaf devouring caterpillar, I have at various times tried several expedients to destroy them, and among other things turpentine, sulphur, &c., but have invariably failed, until I discovered that the spirits of Hartshorn, applied by means of a sponge attached to the end of a pole, and thrust into the midst of the web, caused instantaneous death to all living matter coming in contact with it.

I am now sowing charcoal dust on my wheat, at the rate of fifty-two bushels to the acre, and will give you the result of the experiment in the fall.

Yours, truly, Rob't L. Pell.

Pelham, Ulster co., May 16, 1843.

Domestic Economy

BUTTER MAKING.

We have been favored with three replies to the inquiry of "The Neighbors," on the subject of making butter, published in our last number. We annex two of them—one from a lady of Vermont, to the superior quality of whose butter we can testify, and the other from a lady of Orange county, whence comes the best butter found in the New-York markets. In our next, we shall give the reply of "L. B., a farmer's wife," of Madison county.

Messrs. Editors—A request has been made through the medium of your paper, for some practical dairy woman to give a minute description of the process of making good butter—the kind of pan, churn, ladle, &c.; but my own experience is all I shall attempt to relate, and that will not comprise information with regard to improved materials, or any great variety; for I used the old fashioned brown earthen pan, and a churn that might have been manufactured from some of the first timber ever felled in Vermont, and the only ladle used was my hands.

The process of setting and skimming the milk—removing the cream preparatory to churning, and separating the liquid from the butter, after having been thoroughly churned, demands great attention. Great care should be taken to have the pans perfectly cleansed. Never having practiced making butter to any extent in mid-summer, there are some items in my experience that would not be applicable to those who are engaged in the business for the whole year. My practice was to place the pans, after cleansing, around the fire, keeping them warm till wanted for the milk, which was strained while warm into the pan, and placed immediately upon a shelf, where it should by no means be disturbed until the time of removing the cream, which varied from two to three days, depending upon the heat, cold, or dampness of the weather. The milk was not suffered to become acid,* or at all thickened; and the cream when taken from the milk, was separated from it as entirely as possible, and churned in three or four days, and always at evening in cool weather. Cream was removed from the milk into a stone jar, and kept closely covered until a sufficient quantity for making twelve or fifteen pounds was obtained. The churn was prepared for the cream by the application of boiling water, suffered to remain in it thirty or forty minutes, when it was removed and the cream put in to stand a little time before churning, and occasionally stirred by raising the dash. It was then churned moderately at first, the rapidity of motion increasing as the cream thickened; nor was the labor suspended until the butter was collected into one mass; it was then removed to a wooden tray or bowl with the hands, pressing out all the buttermilk possible, and a little salt added, when it was removed to a cool place to remain until the following morning; then thoroughly worked and a little salt well mixed, and again placed in the dairy for several hours, when it was again carefully worked, and if necessary, salt added, and a tea spoonfull of salt petre with twice the quantity of white sugar pulverized, to every six pounds of butter. It was then made into small rolls, and carefully packed in a firkin. If to be kept through the summer, brine should be made to cover it.

If I have not been sufficiently definite in relating my experience in butter making, to enlighten one person, to say nothing of "The Neighbors," it may have a tendency to elicit some other person's experience which shall be decidedly beneficial not only to "The Neighbors," but to the community. Martha.

Messrs. Gaylord & Tucker—In the May No. of the Cultivator, "The Neighbor's" propound some questions as to butter making. Living as I do in Orange Co., which ranks A, No. 1, in the manufacture of butter, I felt an anxiety to give the desired information, and for this purpose have obtained the following directions from an aged female friend, who for upwards of 40 years, has had the management of a large dairy, and has probably made and packed down 1500 firkins of the very choicest Orange Co. butter, with her own hands.

Here you have it "*verbatim et literatim.*"

Newburgh, May 15, 1843. T. M. Niven.

One of the first requisites is perfect cleanliness in every utensil and implement used about the dairy. The butter should always be made and worked in a cool cellar. The milk pails (wood is preferred,) should never be used for any other purpose; they should be thoroughly cleansed daily, and be well aired and dried after washing. Immediately after milking, the milk should be strained into tin pans usually holding 12 or 14 quarts—the pans of course being clean and sweet—a little cold spring water being put into each pan before the milk is put into them.

In warm summer weather, the milk should stand in the pans about 24 hours, or until it becomes thick. The milk is then thrown into the churn, filling it about half full, (always remembering the first requisite of cleanliness and sweetness,) and is permitted to stand about half an hour before the churn is started. Care is to be taken that the churn works moderately, as too great rapidity of motion is injurious both to the flavor and color of the butter.

Dissolve one table spoonful of saltpetre to 15 gallons milk, and put it in before the churn is started, adding as little water as possible during the process, merely to prevent the milk frothing. As soon as the butter is formed, the churn should be stopped. A pail full of cold spring water may now be added, as it will assist the gathering of the particles of butter. The wooden butter ladle and tray are now required; they both need scalding with boiling water, and are then kept in cold water until the moment they are needed. The butter is gathered with the ladle and put into the tray, where it is worked with the ladle for some time, until the milk is all expressed from the butter, a little cold water being used for this purpose. Too free use of water at this stage is injurious, as it tends to destroy the rich flavor of the butter.

The salt may now be added, (best Liverpool fine salt is preferred,) and as a general rule I would say one quart of salt to 15 gallons of milk, but a little experience will enable every person to judge of this for themselves; the salt should be thoroughly worked through the butter. In very warm weather it may be necessary to let the butter stand in the tray 12 to 18 hours, in a cool dark cellar, frequently working it over during this time, and expressing the brine until it becomes cool and solid; it is then in a situation for packing away in the tub or firkin, and should be carefully excluded from the atmosphere until used.

LARD FOR LIGHTS, &c.

Messrs. Gaylord & Tucker—One of my neighbors last summer got a lard lamp at Oswego, with a wire attached to heat the lard, which proved a "no go." Even some of our oil we buy at the stores is ditto, to my certain knowledge. What then do you suppose I thought when one of the family told me that two of the neighbors burnt lard in common lamps, and she should try it in ours. Why I thought the manufacturers of lard oil would not have so good business after all, if folks should generally find the plan to work well. However, I did not feel much afraid of its injuring their business much. Our lamp was filled with melted lard, and it burned so that I pulled down one of the wicks, and then it gave nearly as much light as common oil with two wicks. Just before using, we fill up the lamp with melted lard, and if it is liquid at the bottom of the tubes, it will burn well in our store room, though pretty cool, till it gets one-fourth of an inch below the tubes, and give a brighter light than any oil I ever saw.

Making Cows milk easy, with a penknife, was a thing that seemed about as strange to me when I first heard of it, as burning lard in a common lamp. However, experience proves that a penknife blade of a proper shape, or a harness awl, which is better, inserted in the hole of the tit that milks hard, improves the milking process very much. Fill the tit full of milk, and put in the instrument the proper length, without touching the sides of it, and most cows, I think, will not flinch, if the knife be sharp. All that is cut is a thin skin, and the pain is trifling. If the cut is not too large, the cow will not leak its milk, but if it is made to milk as easy as those do that leak, the effect will be similar.

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* A little acidity of milk will not at all impair the sweetness of butter.

Cotton Shirts, it is said, when half worn, will last as well in hot weather as new ones. I suppose the assertion is not far from the truth, and am full as sure that new ones are the most comfortable in cold weather, and thin ones in warm weather. Accordingly, when warm weather comes on, I want enough half worn shirts on hand to last me through it, and when cold weather comes on a plenty of thick ones; I should not care if they were twice as thick as I can commonly get. The cloth I am sure, need not cost much more per yard, nor the making, buttons, or thread, much more, while I am certain they would be as warm and last as long. CEPHAS.

Hannibal, N. Y., 1843.

TO COLOR RED AND YELLOW.

To color red and yellow, we give the following receipts, which we are assured by those most competent to judge, will produce superior colors. The receipt is for dyeing wool or woolen cloth.

To dye one pound of yarn or flannel requires the following articles:

3 ounces of alum,
1 " cream of tartar,
8 " of madder,
½ " of stone lime.

1. Prepare a brass or copper kettle with about five gallons of water, bring it to a scalding heat, then add three ounces of alum pounded fine, and one ounce cream of tartar; then bring the liquor to a boil, and put in the woolen and boil it for two hours. It is then to be taken out, aired and rinsed, and the liquor thrown away.

2. Prepare the kettle with as much water as before, and add to it eight ounces of good madder pounded fine, and well mixed in the water before you put in the woolen. When the dye is as hot as you can bear your hand in, then put in the woolen, and let it remain in the dye for one hour, during which time the dye must not boil, but only remain at a scalding heat, observing to stir about the woolen constantly when in the dye.

3. When the woolen has been in one hour, it is to be taken out, aired and rinsed.

4. Add to the dye one half pint of clear lime water, which is made by slaking half an ounce of lime to powder, then add water to it, and when settled, pour the clear part into the dye, and mix it well. Now put in your woolen, and stir it about for ten minutes, the dye being only at a scalding heat. It is then to be taken out and rinsed immediately.

N. B. If you wish the red very bright, add quarter of an ounce, or nearly half a table spoonful of what dyers call aquafortis composition, at the time of putting in the madder.

For yellow dye the same proportions as for red, excepting that for the eight ounces of madder, one pound of fustic is to be substituted. The woolen must be boiled in the alum and tartar water an hour and a half, then taken out, cooled and rinsed slightly.

In a new liquor put in your fustic, secured in a thin coarse bag, and boil it for two hours; then take out the fustic and put in the woolen, and stir it while boiling for one hour. Then to be taken out, cooled and rinsed.

PRESERVATION OF ISABELLA GRAPES.—At the Horticultural rooms on Saturday, we saw a bunch or two of Isabella grapes of last year's growth, in a very tolerable state of preservation. They were exhibited by Mr. J. L. L. F. Warren. He had packed them in cotton last autumn, and placed them in a closet, where they had been left *forgotten*, until the time of spring house cleaning.—*N. E. Farmer of May* 24.

TO MAKE FRENCH ROLLS.—Take a spoonful of lard or butter, 3 pints of flour, a cup of yeast, and as much milk as will work it up to the stiffness of bread; just before you take them from the oven, take a clean towel and wipe them over with milk.—*Nashville Ag.*

"VALUABLE COWS," AND TOUGH STORIES.

MESSRS. EDITORS—There was a clergyman "down east," who had among his parishioners a young man who was more remarkable for plainness of speech than courtesy, and who sometimes got himself into difficulty by calling things by their right names. To prevent this, the minister one day hinted to him, that when a man asserted what he believed to be false, it was impolite to tell him he lied, but that dissent might be expressed by a whew! or whistle, proportioned in intensity to the enormity of the offence. The clergyman was one of those who explain as the result of natural causes, all the miracles recorded in the bible. The very next sabbath his text related to the loaves and fishes that fed the multitude in the wilderness. The loaves he contended were not ordinary loaves, but of the size of Mount Tom, referring to a well known conical hill in the vicinity. At this point of the discourse, the clergyman and the audience were electrified by a whistle so shrill and prolonged that many sprung to their feet. "What!" said the clergyman, turning to Jonathan, "you disbelieve me do you?" "Oh no;" was the prompt reply; "I was only thinking what an oven they were baked in!"

Now I sometimes read the papers, and I am so easy of faith, that I am able to swallow nearly every thing I find in print; but now and then I meet with something that will not go down, no way I can fix it. In the N. G. Farmer, for May, I met with the following stumper, copied from the *Conn. Farm. Gaz.* "Valuable cows. Mr. Samuel Baldwin, of Washington, Ct., made, between March 4th and December 8th, 1842, from two cows, besides supporting a family of two persons, four hundred and thirty-nine pounds of butter, and twelve hundred and fifty-four pounds of cheese."

I rubbed my eyes and read it over again to see there was no mistake. Two hundred and nineteen and a half pounds of butter to a cow! said I to myself. Well that *might* possibly be, though the best butter dairies in the country rarely average one hundred and eighty pounds to a cow; and when Deacon Green's old red made in the whole year 200 pounds, it was thought most marvellous. But in addition to this, here was six hundred and twenty-seven pounds of cheese to each cow; more than was ever before made from any cow in this country, when the whole milk, cream, butter and all went in, and full double the yield of ordinary dairies! But my good genius whispered that it was not best to whistle yet, and suggested that the cheese might be *white oak cheese*, that is cheese made from milk from which all the oily matter has been skilfully extracted, and that in this way *all* the butter and *all* the cheese might be separately obtained. The answer to this was, that in all the butter and cheese making I had ever seen, there would be butter-milk and whey, a little at least, and here was scarcely any provision for either. Thus you see that like many other folks, the more I studied the worse off I was, and finally, after every effort to go it, and even pinning back its ears and greasing it, *a la Crockett*, am unable to swallow the '*crittur*.' Still the fault may be in *my* faith, and not in the story: if so, let the good old land of steady habits have the glory of possessing two cows, "unrivalled and unequalled." So says one who boasts of being a CONNECTICUT BOY.

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SALE OF DURHAM SHORT HORN CATTLE AND SOUTH DOWN SHEEP.

THE subscriber, desirous of reducing his stock, will offer for sale, at auction, on Wednesday, the 15th of September next, at 10 o'clock, A. M. at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers and calves, and between 70 and 80 head of South Down sheep, consisting of bucks, breeding ewes, yearlings and lambs, bred from the stock imported by Mr. Hawes in 1832, and from bucks imported since.

Messrs. Corning & Sutham, will also offer at the same time and place, some of their celebrated HEREFORD BULLS, of different ages. C. N. BEMENT.

Three Hills Farm, Albany, June 1, 1843. 4t.

WARREN'S HORSE POWER AND THRESHING MACHINE.

THE subscribers, the venders and sole agents for these machines, as now made, offer them with the fullest confidence to the farmers as being those which may be relied on for efficiency, &c. in accordance with recommendation, and as therefore suited to their wants, and being at the low price of $75, for a two horse power and threshing machine, must necessarily cause them to be generally used.

L. BOSTWICK,
J. PLANT,
New-York, May, 1843. 2t. 58 Water st.

BADGER'S HORSE POWER, &c.

BADGER'S Horse Power, of which a cut and description is given in another part of this paper, is manufactured at Auburn, N. Y., by the subscribers. The price for

Horse Power and Thresher, $115·00
Horse Power alone, 90·00

Also manufactured and for sale by the subscribers, Hussey's REAPING MACHINE and CORN CRUSHER, which took the first premiums at the State Fair held at Albany, in 1842. All orders punctually attended to. HUSSEY & BURGESS.

Auburn, N. Y. May 16, 1843. 2t.

POUDRETTE,

OF a superior quality, may be had immediately, on application to the New-York Poudrette Company, 23 Chambers st New-York. Price, three bbls. for $5—or ten bbls. for $15, delivered on board vessel. Orders with cash, may be addressed to the subscriber, 23 Chambers st., New-York.

May 23, 1843. D. K. MINOR.

PLOWS, PLOWS.

THE subscriber has just received an extensive assortment of Center Draft Self-Sharpening Plows, made from the best materials, and are warranted to work well. Also Subsoil Plows of three sizes, suitable for one, two or three horses, for sale at the following prices, viz:—No. 1, $8; No. 2, $10; No. 3, $12, with an extra point to each. Also Straw Cutters, Corn Shellers, Corn Planters, Fanning Mills, Hoes, Spades, Shovels, &c. Garden, Grass, and Flower Seeds, for sale at wholesale and retail, on liberal terms, by D. O. PROUTY,

May 15, 1843. 2t. No. 176 Market st., Philadelphia.

CUMMINGTON SCYTHE STONES.

THE attention of farmers and all who use whetstones throughout the United States, is respectfully invited to an article now manufactured from the celebrated "Robbin's Ledge," by J. S. Stafford & Co., Cummington, Mass. The decided superiority of these stones is acknowledged by all who have given them a trial, and the eager demand for them from those sections of the country into which they have been introduced, is the best recommendation that can be given them. The public are requested to satisfy themselves in regard to the merits of the above article, by giving it a trial. For sale at the manufactory; also by *Wood & Folger*, 219 Pearl-street; *William H. Wight & Co.*, 100 John-street, and *Clark & Wilson*, 7 Platt-street, New-York—*Humphrey & Lansing*, and *Van Alstyne & Son*, Albany—*Kelloggs & Co.*, *Warren, Lesly & Hart*, Troy, N. Y., and will be furnished at the principal villages throughout the country.

Orders addressed to FRANCIS BATES, Agent, Cummington, Mass., will be punctually attended to. April 11, 1843.—3t

REPRINT OF CHAMBERS' EDINBURGH JOURNAL.

To be published at the Albion office, 3 Barclay-street, New-York.

EXTRACT FROM THE PROSPECTUS:—It has long been a matter of surprise, that amidst the almost countless number of reprints of British works daily issuing from the American press, the above has not formed a part of them.

Chambers' Journal is conducted by William and Robert Chambers. It is extensively circulated throughout the British isles, and commands commendation and respect wherever it is known.

In order to put this work within the reach of all classes of the public, we have determined to issue it at the very low price of one dollar and a half per annum; and also to furnish it to agents at a discount from this price of thirty-three and a third per cent. And in order to disseminate the publication still more extensively, we have determined to give individuals or companies of individuals who may order five copies, the advantages possessed by agents, and to extend to them also the benefit of the discount. A remittance of five dollars, then, provided it be in funds at par in the city of New-York, or not more than five per cent discount, will command five annual copies to one address.

The publication is weekly, contains eight pages, and is printed in the quarto form, with neat type and on good paper. Our edition will be an exact transcript of the Edinburgh copy.

It is scarcely necessary to state, that the low price at which we offer the work, will oblige us to adhere to the cash system, without any deviation whatever.

Agents will please to send their orders forward as early as possible. We shall reprint from the first number of the present year, so as to make the volume complete.

WILLIAM LACY, Agent, Daily Adv. office, Albany.

"THE FARMER'S LIBRARY."

THE CULTIVATOR was commenced by JUDGE BUEL, in 1834; its motto and its object, "*To improve the Soil and the Mind.*" Faithful to this great end, the Cultivator from the first took a high rank among the periodicals of the time; and rapidly extending its influence and securing the aid of able co-laborers, while it numbered among its contributors the most distinguished and intelligent of American agriculturists, its position, as an organ of the farming interests of this country, soon became second to no other journal of its kind, in circulation and usefulness. From the first it has been the depository of a mass of facts in relation to agriculture, rarely found in any series of volumes; and the favor with which it has been viewed, and the ample support accorded to it, may be in a great measure attributed to the practical nature and value of the papers with which it has been filled. The first six volumes contain the rich fruits of the labors, experiments, and matured experience of JUDGE BUEL. At the time of his lamented decease, the Cultivator passed into the hands of the Proprietor and Editors of the Genesee Farmer, with which publication it was united, and by whom it has since been conducted. Of the four volumes that have been published since it passed into the hands of the present conductors, it does not become them to speak; but if the large, not to say unprecedented support they have received, and the numerous testimonials of approval freely given them, may be taken as evidence of the manner in which their labors have been viewed by the public, they have abundant reason to be satisfied. This high standing of the Cultivator, no pains or expense will be spared to maintain. In matter, in execution, in its illustrations, it is intended it shall be without an equal or rival:—that it shall be eminently worthy of the name which has been given it, of "THE FARMER'S LIBRARY." Embodying as it does, the practice of numbers of the ablest agriculturists of the country, it is believed no work can be found, from which the information, in all its details, so necessary for the American farmer, can be obtained so perfectly or at so little cost, as from the Cultivator. The series, in truth, constitute a Farmer's Library of the most comprehensive kind. As the work is stereotyped, the whole series can be furnished to those who wish it, and the constant demand for the back volumes proves that it is in the light of a library for the farmer the whole work is viewed by the public.

The first four volumes are furnished at 50 cents each, and the remainder at $1,00 each. Annual subscription, $1,00. The vols commence with the year; and any person wishing to obtain one or more vols. can do so by remitting their money through their postmaster, to LUTHER TUCKER, Publisher of the Cultivator, Albany, N. Y.

☞ Complete sets of the Cultivator can be obtained of
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THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Agency for the Cultivator in London.—Orders and advertisements for "The Cultivator," are received in London, by P. L. Simmonds, Foreign Newspaper Agent, Agricultural Agency Office, 18 Cornhill, opposite the Royal Exchange.

NEW-YORK STATE AG. SOCIETY.

The next meeting of the Executive Committee of the N. Y. S. Ag. Society, will be held at the Eagle Tavern, Rochester, on Wednesday, the 12th of July, at 9 o'clock, A. M. A full attendance of the Committee, consisting of all the officers of the Society, is particularly requested, as at this meeting the arrangements for the coming Fair will be made, committees and judges appointed, &c. LUTHER TUCKER, Sec'y.

MONTHLY NOTICES.

Communications have been received during the past month from John M. Harlan, Sanford Howard, A. W. L., M. W. H., H. Watson, J. J. T., A Subscriber, J. G. Chambers, G. M. Eichellberger, J. W. Thompson, C. N. Bement P. F. W., D., Z. A. Drummond, K. L., Sam'l Wagner, Alex. McDonald, B. G. Noble.

Acknowledgments.—During the past month we have received "Useful Works for the People, No. IV," from Geo. Jones, general news agent in this city—a small vol. entitled "Man's artificial Institutions of Agriculture, tested by God's natural Institutions of Agriculture, by John D. Wilkins"—"Journal of the Royal Ag. Society, Part 1, vol. IV."—The files of the "New Farmer's Journal," London, for May, and the "Farmer's Herald," Chester, from their respective Editors—"The Farmer's Encyclopedia," Part 9, from Carey & Hart.

"*A Friend to Real Improvement*," has sent us a description and drawings of a butter table constructed by him the last season. The drawings, we regret to say, are not sufficiently accurate for the engraver. We shall be glad to receive a model of his sowing machine, for the State Ag. Society, when he gets it completed, should it, on being thoroughly tested, equal his expectations.

☞ The engraving of "*J. M. H's.*" drawings would cost more than we can afford to devote to the subject. Where drawings are but imperfectly made, we have to incur a double expense, as we have to get correct drawings made for the engraver. We wish those who send us drawings would bear this in mind.

"F. A. P."—The London Horticultural Society's Catalogue of Fruits, can be obtained of Messrs. Hovey & Co., Boston—price $2,00.

"A. P."—The Essay came safe to hand, for which accept thanks. There is a book for you at our office. How shall we send it?

J. W. A. S., Curdsville, Va., will accept our thanks for his favor of June 2.

P. F. W.—Thanks for your letter, of which we shall make a good use. You will find your inquiry respecting ringing cattle, answered at page 30, of our last vol.

N. P. Bailey, Esq., Kingsbridge, will please accept our thanks for his prompt and effectual response to our request.

Dog Churn.—We are promised a drawing and description of the dog churn used in Orange county, in season for our next, by our friend Niven of Newburgh.

Essex Ag. Society's Transactions.—We are indebted to the Hon. D. P. King, Secretary of the Essex (Mass.) Ag. Society, for 12 or 15 nos. of the Transactions of that Society, which have been published annually for the last 15 years. They form an addition to our Library which we prize very highly; as among the papers, are many valuable contributions to agricultural knowledge. The late Timothy Pickering, one of the earliest and most enlightened advocates of agricultural improvement, was, if not the founder, for a long time the President of of this Society, and its Transactions embrace many valuable articles from his pen.

Abortion in Cows.—It will be seen by a letter in this paper, from Dr. Thomson, President of the New Castle Ag. Society, Delaware, that his herd, as well as several others in that vicinity, have suffered severely from this cause. As the subject is one of much importance, we shall be glad to receive any facts which may tend to throw light either on the cause or remedy of this evil. We are greatly obliged to S. Wagner, Esq., for the valuable paper he has furnished us on this subject, translated from the "*Allgemeine Land-unthschaftliche Zeitung*," of Halle.

Mr. Bates' Short Horns.—It will be seen by an advertisement in this paper, that Mr. Vail of Troy, offers for sale several young animals, bred from his importation from the celebrated herd of Thomas Bates, Kirkleavington, England. Notwithstanding the "hard times," we doubt not the valuable qualities of these animals, as well as the difficulty of obtaining this strain of Short Horn blood, will command for them a ready sale.

Devon Cattle.—In company with several of our friends, we had the pleasure, a few days since, of viewing a lot of Devons from the extensive herd of Geo. Paterson, Esq., of Maryland. The lot consisted of a cow, with a bull calf of four months at her side, a yearling bull and a couple of yearling heifers, and were on their way to Black Rock, accompanied by their owner, S. Allen, Esq. The cow was imported some years since by Mr. Paterson. The younger animals were all from a bull imported about two years since, from the estate of the Earl of Leicester, and bred by Mr. Bloomfield, the breeder of the fine Devons for which that estate has been so long celebrated, and were all worthy representatives of this highly esteemed herd. The bull calf particularly, was a splendid animal, and will be hard to beat by any breed at the next State Fair, where we shall expect to see the whole lot, and where they will not fail, for their fine forms and popular deep red color, to atttract general admiration.

Blackwood's Magazine.—The June no. of this work was promptly issued from the New World office, New-York, by J. Winchester, by whom it is regularly republished at the extremely low price of $2,00 a year.

"The Lady's Pearl," is the title of a handsome monthly of 24 pages octavo, published at Lowell, Mass., by P. D. & T. S. Edmands, at $1,00 a year. It is edited by Mrs. Mary A. Fletcher, a lady admirably qualified for the task, if we may judge from the July no., the only one we have received. Its original as well as selected articles, are of a far higher character than the mass of those which appear in our more fashionable monthlies. We wish it success.

"Useful Works for the People, No. IV."—We are glad to see that Messrs. Greely & McElrath are are continuing their series of cheap and valuable publications. This no. contains "Chemistry of the four ancient elements, Fire, Air, Earth and Water, by Thomas Griffiths, lecturer on Chemistry, &c. at St. Bartholomew's Hospital," and the "Book of Philosophical Experiments, by J. S. Dalton," illustrated by some hundreds of engravings and experiments—two as valuable works as could be placed in the hands of those who wish to acquire a a knowledge of the elements of chemistry; both essays being intended for those who have not studied the science, and divested as much as possible of technical terms, with the most simple explanations of all such terms as are used. These works are given in a neatly executed pamphlet of 84 pages octavo, closely printed in double columns, for 25 cents.

Engravings.—We have the following on hand, waiting for insertion:—Designs for a Laboring Man's Cottage, by T. M. Niven—also, from the same gentleman, Plans of outbuildings and grounds, for the Dwelling House published in our January no.—a Gate, by J. Willard—a Bee Hive, by "N. of Washington"—a Sheep Barn, by J. Beach, and several others.

Seed Store at Newark, N. J.—Our friends in New Jersey, as well as dealers in seeds generally throughout the country, are referred to the advertisement of Messrs. Gibson & Ritchie, in this paper, of whom seeds of the best quality, and at prices suited to the times, may be obtained.

The Dairy—Great Product.—We commence in this paper, the publication of an Essay on the general management of Dairy Cows and the manufacture of Cheese. It was written for, and obtained a premium from, the Herkimer Co. Ag. Society at its last meeting; and is from the pen of a practical man, who gives the results of his own practice and observation for a series of years. As it will occupy portions of two or three nos. of our paper, we will here state that Mr. Fish, the author, has produced by his management, a greater amount of cheese, on an average, from a dairy of twenty cows, than has ever before, to our knowledge, been made, exceeding considerably the large products of those dairies mentioned in our May number. From twenty cows, he made last season, commencing on the 19th of April and closing about the first of January, 13,996 lbs. cheese and 301 lbs. butter, being an average of $714\frac{3}{4}$ lbs. per cow. No better proof surely need be required of the benefits to be derived from a proper care of dairy cows, and a skillful management of their milk. The cheese which received the first prize at the last Fair of the American Institute, was, we believe, from the dairy of Mr. Fish.

Dr. Cloud on the Culture of Cotton.—A letter to the Editors, speaking on this subject, says—"I was surprised to see the system recommended by Dr. C., denounced as humbuggery. I have no idea that such a crop as he obtained, will be often produced; but the PRINCIPLE he goes on is the right one, and is applicable to all crops as well as cotton. Good culture and good manuring, are what is wanted, and these are no humbugs."

Agricultural Implements.—We invite attention to the advertisement of B. M. Freeborn, the successor of his father, in the well known establishment of G. Freeborn, New-York, of whom all the most improved farm implements may be obtained.

THE SEASON AND THE CROPS.

We make the following extracts from letters to the Editors, received during the past month:

Salem, Indiana, May 20:—"Wheat has been injured very materially by the winter, and the crop will probably be less than an average one."

Hannibal, Missouri, May 15:—"We have the most backward spring ever known here. Our wheat crop is literally killed. I know of none that I think can produce ten bushels per acre."

Pope Creek, Mercer co., Illinois, May 17:—"Added to the scarcity of money, and the extreme hard times, and unusual low price of all kinds of products, we have with us this season, another and greater calamity than we have ever before had, in the almost total failure of the wheat crop. There is not, so far as we can yet learn, one acre in fifty of winter wheat, that will pay for harvestsng or reimburse the farmer for the seed sown."

Zanesville, Ohio, May 28:—"The season is very backward, but the weather lately has been favorable, and the growth of vegetation rapid. The prospect for wheat is only tolerably good. It suffered much from the winter, excepting the earliest sown."

Iberville, Louisiana, May 29:—"Our crops are full one month behind the usual time. Our cane, that was four feet high on the first of June last year, is now not more than two, and the ratoons a very bad stand. We generally have roasting ears by the first of May; this year we shall have them in about a week from this time. All our early fruit was destroyed in the bloom; garden vegetables we have in abundance, and the weather is now fine for the advancement of vegetation, so that we may yet be blessed with an abundant crop. We have feared an overflow this year, but the Mississippi has not been over the natural banks, and has commenced falling within a few days."

Delavan, Wis'consan, June 7:—"The winter has been very severe; more so than was ever before known. Coarse grains very scarce and high; wheat is becoming so. Winter wheat appears generally very fine, as do all crops except corn and vines."

CATTLE SHOWS THIS YEAR.

Genesee.—The annual Fair of the Genesee Co. Ag. Society is to be held at Batavia, Oct. 4, 5. From its list of Premiums we are glad to perceive that upwards of a hundred vols. of Agricultural Journals are to be awarded.

The Lewis, Montgomery and Steuben Societies, have issued their premium lists, but the times of holding their Fairs are not mentioned.

Oneida.—The Fair of this Society is to be held at Vernon, Oct. 5, 6.

Essex, Mass.—The Fair of this celebrated Society is to be held at Andover, Sept. 27

IMPROVEMENT OF DOMESTIC STOCK.

Few things are of more importance to the agricultural interest of a country, than their domestic animals; and any decided improvement in the breeds, forms a solid addition to the productive wealth of a nation. For instance, any change in the character of our cattle, which, by adding to their weight, aptitude to feed, early maturity, &c. should give a gain of twenty per cent on their value, would increase the worth of this item alone about fifty millions of dollars. That such an improvement might be made on the common stock of this country, there are few intelligent men that at the present time will doubt. Facts and experience are most conclusive on this point; and what is true of cattle, will also hold true of all other varieties of domestic animals.

But while most will readily admit the necessity and practicability of improvement, there are some differences of opinion among practical and well informed men as to the best methods of effecting it. Some contend that the only rational prospect of improvement is to be found in introducing foreign stock, and breeding from these, to the exclusion of all native animals. There are others who maintain as strenuously that there is no necessity whatever for any introduction of foreign blood; that we have among ourselves, and in our own herds, all that is necessary to produce as perfect animals as any of the improved breeds of Europe. Others assert that the truth lies midway between these extreme opinions; that the true course is to import valuable animals, if they can be obtained, from abroad, and breed them to our most valuable and choice stock, taking care to select such as are the best adapted to produce any given result or quality. We shall examine these opinions in their order.

Careful and skillful breeding lies at the foundation of all improvement in stock, and this is mainly effected by judicious selections. Color, form, quality and disposition, are all under the control of the breeder. He can equalize and harmonize the whole, or he can develop one point at the expense of the others. It is rare, indeed, perhaps never, that any single point is found in its highest degree of excellence, except at the expense of some other quality. Thus the taking on flesh rapidly, is incompatible, from the very nature of the case, with a copious secretion of milk; and the deepest and best milkers of the herd, may usually be set down as the most raw boned, not to say worst looking of the whole. The reason of this is obvious: the quantity of nutritive matter taken in the food is of necessity limited, and it is impossible for it to perform two offices, or rather be in two places at once. It cannot go to the formation of flesh and fat, and yet be secreted in the form of milk. The term *best*, then, as usually applied, may admit of a different meaning. The best animal for the grazier or butcher, is not necessarily the best for the dairyman; although there are few deep milkers that will not, when the secretion of milk is suspended, take on flesh rapidly—a fact which shows the incompatibility of the two. The best animal, or the one which it should be the object of the breeder to produce, is the one that combines the most valuable qualities, and it is in this sense that the term should be always understood.

The number of those who insist that we are to look to England, and to the produce of importations from that country alone, for the improvement of our stock, is of course limited. There is something absurd in the idea of replacing the ten millions of our native cattle by imported ones, or their progeny, in any reasonable term of years. Besides, had we the means to make the importation, they have not the animals for us. Notwithstanding the attention paid to the breeding of animals in England, the number of the improved animals is still limited; and though cattle to meet any demand might be supplied, such as we should require, or ought to require, could not be had. Great changes in the character of the stock of any country, demand time. It has taken more than two hundred years since Gov. Winslow introduced the first three heifers and one bull into this country, to bring up our stock to its present numbers. This was in 1624; and time would enable us to fill our country with imported stock, were it necessary to wait for such a consummation. As the question, however, relates to present improvement, the idea of depending on importation wholly, must be discarded.

The second position, viz: that we have in our present native herds all the materials necessary for improvement, and that a recurrence to foreign improved breeds is unnecessary, is far more plausible, and has a much greater number of supporters, than the one we have just considered. It is argued, and truly, that all the improved breeds are made up breeds; that it is idle to seek for what may be called an original breed; that the varieties of domestic cattle are depending on climate, crosses, or perhaps in some instances on accidental circumstances; that the improved cattle of England have been bred almost within the memory of man, from old varieties already existing there; that what has been already done, may be done again; and that nothing but the same judgment in selecting animals to breed from, and the same skill and perseverance in following the laws of breeding to their results, is wanting, to produce as valuable stock from our native varieties, as has been produced from the native varieties of England. We have purposely stated this argument in its strongest form; because, while we admit the possibility of producing, in this country, improved breeds equal perhaps in value to those at present existing in Europe, we think it would be the height of folly to undertake the task, in preference to availing ourselves of the labors and skill of European breeders. To make ourselves understood, we will select the Short Horns or Durhams, as the breed best known, for the purpose of illustration.

We can trace the Short Horns, as a distinct breed, to its originators, Charles and Robert Collings, some fifty years since. Others, as Berry and Coates, co-operated most effectually in forwarding the improvement commenced by them; and within the last twenty years, the number of breeders of this stock has multiplied in every part of England. It cannot be denied that more skill has been exhibited, a greater acquaintance with the true principles of the improvement of stock acquired, and the real points that constitute the value of animals more fully developed in this case, than in any previous instance. Scarcely a variety of domestic cattle can be found, from which animals may not be selected, with one or more points as faultless, and as well developed, as in the improved stock; but in most cases, these valuable points must be considered as accidental, as experience proves there is no certainty of their being continued in their offspring. The science of breeding consists in uniting in one animal as many of these valuable properties as possible, and rendering them constitutional and permanent, so that they may descend to their progeny, or so that the danger of their loss may be avoided. This is what has been done in the case of the Short Horns. That their excellencies are permanent, and fixed in the breed, is proved by their invariably imparting more or less of them to any variety with which they are crossed; that the blemishes and faults occasionally to be found in them, are to be considered as accidental, and not inherent in the breed, is proved by the fact that these defects are rarely propagated, or reproduced in their progeny. It has taken at least fifty years to bring up the Short Horns to this point of excellence; and there is no probability whatever that any modern skill or knowledge could materialty shorten this period in engrafting these valuable qualities upon the native stock of this country, by simple selection and breeding from our varieties alone. We must, then, to raise up an American breed from native stock only, combining as many valuable qualities as the Short Horns at present possess, employ some fifty years, with much labor and money, and then find ourselves at precisely the point of improvement where the English breeders now are. We think, then, that the advocates of an exclusive American breed, or one produced from our native varieties, without reference to foreign stock, are guilty of as great an absurdity as those who would rely on imported stock only, to replace with an improved stock our native herds.

The third course for improvement is that of those who believe that the best way is, to obtain the best and highest bred animals from abroad, when such can be procured, and breed them to our best and choicest native stock, having reference, in our selection of animals, to those points we consider most desirable in stock, or in which, perhaps, the imported are the most deficient. And this is the method to which we give a decided preference, and to which, it is believed, we must resort and adhere, before any essential change in the character of our stock, generally, will be effected.

There are some who seem to suppose that we are to regard the high bred imported animals as perfect, and incapable, by any skill of breeding, of further improvement. No breeder, however, who has any knowledge of his profession, will view the matter in that light. He sees in the Short Horns, for instance, animals very superior to the common stock of the country; animals that combine a far greater number of valuable points, and are of consequence a decided improvement upon any native breed; but he is far from looking on them or any other breed of cattle as perfect, or incapable of further improvement. On the contrary, he sees in these improved breeds, and these fine imported animals, the basis of still greater improvements; he sees in them, what the labor of the most skillful and careful in England have taken fifty years to accomplish; and instead of going back to the point from which they started, he intends to make the highest vantage ground they have reached his starting point in the career of further progress and improvement.

In breeding from foreign improved stock, it is necessary the American farmer or breeder should pay particular attention to the purity of blood, and the predominating qualities of the animal. The principal value of any improvement in animals, consists in its permanency; indeed, this quality is one of the main things that marks the difference between the high bred imported animal and *some few* of our native stock. If the improvement is not permanent; if the valuable qualities have not become fixed and constitutional, there is no security that they will be imparted to the progeny, or that the high raised hopes of the breeder may not end in bitter disappointment. It is in determining this question of blood, that the pedigree becomes important; and a reference to the Herd Book will inform the breeder whether he may depend upon stock possessing the qualities of their parents, or leave it to be determined by the event whether that stock shall possess most of the qualities of the Short Horn or the scrub. In regard to the qualities of the imported animals from which we expect improvement to our herds, it appears to us that there are two points that have been sometimes overlooked in making our selections. We have not paid attention enough to their milking properties, or their ability and aptitude to labor. The old Short Horns were the best milking breed in England—a reputation which, as a whole, certainly does not belong to the improved breeds. That there are some superior milkers among them, is notorious; and that milking deep might be made one of the peculiar characteristics of the breed, no well informed breeder doubts. We very much question, however, whether there is at this time in Europe or in the United States, a herd of *any* improved stock, Short Horns, Herefords or Devons, from which twenty-five cows can be selected, that would produce as much butter and cheese as the twenty-five native cows mentioned at page 79 of the May Cultivator, or that from the twelve native cows mentioned at page 85 of the same number.* The reason is a plain one; other qualities than deep milking have been principally regarded by their breeders; beef, and not milk, has been the great object. That deep milking can easily be bred into them, no one questions; and this we believe is one of the points that calls for immediate attention. Another point that has not been sufficiently attended to, is aptitude to labor. In this country, very few instances can be found in which high bred animals have been put to the test of labor; but in England, Short Horn bullocks have been subjected to the yoke, and, unless we are misinformed, were found in this respect inferior to the Devons or the Herefords. Indeed, the forms of the animals themselves, indicative of diminished activity and power of locomotion, would lead the observer to expect such a result; and by some it may be considered doubtful whether the aptitude to labor can be engrafted on this stock, unless at the expense of other more important and valuable qualities.

A question, most important to the agricultural interests of the country, is not unfrequently asked, and it is desirable it should be correctly answered; that question is, how can the desired improvements be most certainly and expeditiously made? On this point, we are fortunately not left to theory alone; but we have the result of many experiments, which would seem to be decisive of the matter. In all crosses from a high bred or made up stock, with inferior breeds, there is a constant and powerful tendency to deterioration. Habit is hardly equal to a contest with nature; implanted qualities, unless carefully guarded, are apt to disappear before the powerful tendencies of natural and constitutional ones; and it is to prevent this degeneracy, to retain all the old qualities that are valuable, and add new ones that are desirable, that requires all the skill and caution of the breeder. Man himself, studied physiologically, has furnished some of the most useful lessons which can be offered for the guidance of the modern breeders of animals.

Our opinion as to the true course to be followed, and the one which we doubt not will be generally adopted, is, for the breeder to select a full bred bull of the kind preferred, possessing those qualities most desirable, or indicating that they are inherent in the breed. Much is depending on the proper selection of the male, for it is he that stamps most indelibly his character on the progeny. Ascertain whether the animals from which he is descended, the particular family, we mean, are noted for any particular quality, and what that may be. In the same breed, and of equal purity of blood, animals may be found in which the predominating quality differs essentially. Aptitude to fatten, deep milking, excellence in the yoke, kind handling, &c. &c. may not be prominent in all animals of a breed; and it is for the breeder to select with reference to the qualities, whether of form or color, most desirable. Having secured bulls of undeniable excellence, let the breeder next select from his native stock the best cows he possesses, or that can be procured—those in which the qualities of easy feeding, deep milking and kind dispositions appear to be the most strongly marked and fixed, and breed from such cows only, if he hopes to effect a permanent improvement in his stock. We have never known an instance in which such a cross did not at once mark and change the character of a stock for the better. The cattle shows and fairs of our country prove that these half bloods are far superior to the native stock, in every case, where ordinary attention has been paid to selection in breeding, and that in many instances they have approximated in form and value to the pure blood progenitor. In this *first cross*, we have rarely known the farmer or breeder to be disappointed; it is in the next and succeeding steps in the progress, from which disappointment has arisen, and this has been occasioned by causes perfectly easy to explain. How often have we heard it said, "our first calves were almost equal to the imported bull, but now they are no better than old fashioned stock." And this was true; for they were nothing but the old stock. Let it be remembered that breeding from crosses, without recurrence to pure blood always degenerates; but where the first cross or half blood is bred to a full blood, a half blood heifer, to a pure blood bull for instance, improvement is sure to follow. The course pursued by many, perhaps most of our farmers is this. A native cow is bred to a pure short horn, and the progeny is a fine bull calf. This calf, a half blood, is used for a bull with his herd of native cows, and the farmer is surprised to find such a falling off in the qualities of his calves from that of their sire. Now the true course would be, if the progeny in the first instance was a bull calf, to fit him for the yoke or the shambles; if a heifer, to breed her to a pure blood bull, and a good calf might be considered certain. By this recurrence to pure blood, the stock will be constantly rising; by breeding from crosses without such recurrence, it will be as certainly sinking. By proceeding in the way here pointed out, using full blood bulls and the best native cows, our stock as a whole would be rapidly improving, and the way prepared for an advance on any of the present breeds.

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* In the dairy of 25 cows the product per cow was 561 lbs. of butter and cheese; and of the dairy of 12 cows the product per head was 533½ lbs. In both cases the cows had pasture and hay only.

But it may be doubted by some, whether any improvement on the best of the present high bred cattle, is possible, and the idea of it be scouted as an absurdity. "What," it may be said, "talk of improving a breed by crossing them with those still lower in the scale?" We answer yes, and hope to show there is nothing chimerical in the plan. For illustration, we will again recur to the Short Horns, as unquestionably at the head of the improved breeds. Breeders have enumerated a great number of points as going to make a perfect animal; to make one absolutely perfect, we will suppose that 30 enumerated qualifications are requisite; that the Short Horns, as approaching the nearest to this standard, possess 20 of the desired qualities; and the other varieties or breeds in a descending ratio down to our native stock, which may be put as possessing but five of these requisites. The question is, can an animal possessing 20 good points, be improved by one possessing only 10 or 5? We answer yes, if the one possessing 20 is deficient in any of the points possessed by the lowest, or by 5. 20 may be deficient in hardihood or the power of enduring our seasons; in milking properties adaptation to labor; quality of flesh; or some other point or points, possessed in a remarkable degree by 5; and this deficiency remedied by a skillful cross with 5, which shall engraft and fix the valuable point on 20, would make it 21, or furnish a decided advance towards animal perfection.

The opinions we have advanced in this paper, are not to be considered as mere theory alone; experiment has in a great degree demonstrated their correctness. At our cattle shows, crosses of the improved breeds with our our native cattle, have been exhibited, which have placed beyond a doubt the possibility of rapidly improving our stock in this way, and by their superior qualities furnished every incentive to the undertaking. But there must be no breeding downwards; every cross must be upwards both in blood and in desired qualities. We do do not say that any animals have yet been produced equal to the finest of the improved breeds, but we believe some might be pointed out that would not suffer materially in a comparison with a great majority of our imported animals, for all the ordinary purposes of the farmer.

Believing as we do, that it is to skillful crossing of the improved pure stocks with our best native animals, we are to look for the earliest as well as the permanent improvement of our herds, and the building up of an American breed worthy of the name, the importance of introducing and preserving animals which shall serve as the basis of this improvement, forces itself upon us at once. It is to the pure blood stock already among us, or which may be introduced, that we must mainly look; and every precaution should be used by the breeders of such stock, and every effort used not only to keep them pure, but to provide for their further advance by skillful breeding, and by the infusion of new blood occasionally, to prevent the enfeebling and degenerating effects of too close in and in breeding. The breeders of improved stock can scarcely attach too much importance to pedigree, as in that alone have they proof of the endurance of the valuable qualities of the animals they breed; and the confidence of the public once shaken on that point, or any deception practiced, will be most unfortunate, as seriously tending to check the improvement of domestic stock. Men who do not look at the subject in all its bearings, are sometimes heard to complain of the prices paid for imported or improved animals, and denounce all efforts at improvement as speculation, or mere money making. We, on the contrary, view the improvement of our domestic stock of all kinds, as an affair of national importance, and think the public spirited individuals engaged in the business are richly deserving the approval and the thanks of the agricultural public. If they are well paid for their labors in the cause of improvement, we shall rejoice at it most sincerely; but we have yet to learn that any American breeder has found his purse grow inconveniently heavy, in consequence of his cattle sales. The men who add as efficiently to the national wealth as they do, are, to say the least, entitled to their share.

SEEDS.

Every farmer should as far as possible raise his own seeds, as he will not only thereby avoid a considerable item of expense, but will, if there is proper care and skill used in their production, have such as may be depended upon. There are but very few of the cultivated vegetables and fruits, of which the seeds can be depended upon for the production of plants like the original, if other plants of the same family are permitted to blossom in the immediate vicinity. The cause of this is to be found in the effect which the fertilizing dust or pollen of flowers has on the germs or seeds, when different varieties are placed so near each other that intermixture takes place. It is in fact a real cross, as distinct as that of animals, and with as decided results. For the philosophy of the matter, we must refer to Prof. Lindly's work on Horticulture, or Roget's Animal and Vegetable Physiology. Every farmer or gardener is aware that apples or peaches raised from seeds, are rarely like the fruit that produced them; that melons, squashes, &c. are apt to mix or degenerate, and that where several varieties of corn are planted together, intermixture is certain to take place. We had a fine oppportunity of verifying this last result two years since, when we cultivated some twenty-four or five varieties of corn in a field as an experiment, to test the period of ripening qualities, &c., and the singular manner in which the different colors and qualities were blended, was both curious and instructive. In purchasing seeds from our agricultural seed stores, farmers are very frequently disappointed in the plants produced, a disappointment frequently owing to there not having been sufficient care taken while growing the seeds, in preventing the possibility of intermixture. Beets may be mentioned as an instance of this; as perhaps there are more failures in these seeds, and more instances of degeneracy with these than any others. It may be considered a rare instance of good fortune, if the man who purchases blood beet seeds, does not find when they grow up, that his roots are a coarse unpalatable article, of some shade between red and white, or perhaps yellow, and utterly unlike what he expected. We have found that this result has been prevented, if when the seed beets are set out, and the stalks shoot up, we examine them and select for preservation, those plants, the stems of which are of a deep red color; or when white or yellow are desired, selecting the purest of the kinds, and destroying the others at once. Planting for seed at such distances, that intermixture will not take place in the way pointed out, will also secure the seed from deterioration; but this, except with professed seed growers, is not always convenient. The best way to keep the varieties of early cucumbers, summer and other squashes, &c., when grown as farmers usually produce them in their gardens, is to allow those that set the earliest, and of course nearest the root, to remain for seed. Experience shows that these are less liable to crossing and degeneracy than those that set later, owing perhaps to the number of other blossoms being smaller, and the danger of the fecundating pollen being transported by flies, bees, &c. proportionably less. One thing is clear; seedsmen cannot be too careful as to the quality of the seeds they put in the market. Carelessness as to the kind, or the purity, has an inevitable tendency to destroy all confidence in these necessary establishments, without which it is scarcely possible agriculture should reach the elevated position we trust it is yet destined to reach in this country.

LANCASTER COUNTY, PA.

We make the following extracts from a private letter from a friend at Mount Prospect, near Columbia, dated June 17:

"We have extraordinary weather here so far—a heavy frost on the 2d of June, injuring the potatoes, corn, and garden vegetables. Corn will be short in the stalk with us this year; but short stalks generally bring large ears. I plowed an eight acre field on the 16th, 17th and 18th of May, with four stout horses, often in a trot, plow running twelve inches or more deep, stirring up the ground like a little earthquake, covering under six inches of grass, which had grown through a heavy coat of long manure; and on the 19th and 20th, I planted corn, wetting with strong dung water and rolling in plaster. It came up very black and rich, but the cut worms set to and cut nearly every stalk in the whole field; fortunately for me, the corn was covered much deeper than I wanted it done, and it all sprouted up as fine as ever; but the worms attacked it again, cutting it off the second and third times, and they are at it yet. I replanted the field with sharp sticks, putting a grain in each hole made by the stick, where the worms had cut the corn too near the root. I plastered the corn with a composition new to me, and I suppose to every body else in this neighborhood. I hauled a black substance from the depot at Columbia, which was cleaned out of the steam engines that draw the cars on the railroad—the ashes of bituminous coal, wood, &c. It looks much like fine bituminous coal, but there is considerable wood charcoal in it. I screened the rough particles out and spread it on the barn floor till it became dry. I took of the coal dust about 25 bushels, 10 bushels of leached ashes, 10 of lime, and 6 of plaster, and mixed the whole well together; it was dry enough to absorb about a hogshead of dung water from the cistern, quite thick and dark colored, which I put in. I sowed it along the row pretty thick, and it is astonishing how it made the corn grow. If the cut worm took the stalks off, it would almost rival the orchard grass in growing again. It may be a crop yet, but I doubt it. By plowing deep, the sod got too low for the worms; hence they were more severe on the corn. I have other fields of corn, on which, previous to plowing, I spread long manure, and plastered the manure at the rate of a bushel to the acre; this bids fair to be a crop.

"On the sixth of May, I sowed an orchard broadcast with corn and clover; trees so close that the limbs of of one row touch the other; and notwithstanding the constant shade and cold weather, the corn looks well, and is larger than my other corn, and the clover is growing finely. No kind of a crop, except it is orchard grass, can be expected to grow in an orchard so closely set with trees, and it surprises me to see it grow as it does. I can see in places where several trees are missing, that corn and clover are well adapted to sow together, and that the weeds are not more liable to infest it than other grain. If Mr. Drummond would sow good clean land with corn and clover,—about three bushels of corn slightly sprouted, and a peck of clover seed, swelled and rolled in plaster, to the acre, and harrow and use the roller as it should be done, I shall be much mistaken if the weeds get the better of the clover. If they do, it must be very foul land. I have a field of corn, which I intend, after passing the cultivator through the last time, to sow with clover for pasture.

"I have some doubts about the wheat crop. I rode about thirty miles through this county, and it is evident to me that it will be tight squeezing to be two-thirds of a crop. The wheat generally looks too dark and broad in the leaf, especially in the limstone land. I have elegant wheat, twenty-three acres, which will average twenty-five bushels—some acres will overrun thirty, but it will take it to make up for wet spots where it is thin. If our farmers would use long manure first for corn, and then wheat, instead of putting it directly on wheat, they could raise better crops; but it is unpleasant to work among long manure, and our farmers hate it as much to plow when the plow chokes, as they dislike to read agricultural papers. Lancaster county has a host of good farmers, I admit, but they might still be better if they were not so much prejudiced against book farming, as they call it, and would be willing to read and judge for themselves."

PREMIUMS OF THE MASS. STATE AG. SOCIETY.

As a matter of interest to many of our readers and subscribers, we condense from the columns of the N. E. Farmer, the Premium List offered by that flourishing Society for the present year. The trustees of the Society give notice that they shall again omit for the ensuing year, their Cattle Show at Brighton, and that the state premiums will be awarded to any stock, &c., at the annual show of the Hampshire, Franklin, and Hampden Agricultural Society, in the autumn of 1843. By combining the influence and premiums of the State Society with the County or local associations, more interest it is believed will be excited, and the benefits of the institution more extensively felt than before. We think the dwellers in the beautiful valley of the Connecticut, may count with safety on one of the most imposing and splendid exhibitions that have ever taken place in this country. The New-York State Society, and our friends of the Genesee valley, must look well to their laurels.

$100 is to be divided in premiums among the following descriptions of stock, viz:—Best full blood, and best native Bull,—best full blood and best native Heifer, milked not less than three months, quantity and quality of milk to be considered,—best yearling full blood Heifer,—best pair working Oxen, and best pair three year old Steers.

For the best farm of not less than 70 acres, to which no premium has been before given, $200,—second best $150,—third best $75,—fourth best $50, and fifth best $25. These premiums are on a liberal scale, and we doubt not will find numerous competitors. Farms offered for premium will be visited by the trustees, or an agent, which will save the proprietor the trouble of furnishing an account of his farm. In the meantime he is provided with a series of questions, 33 in number, relating to his farm, its management, &c. which he is to answer to the best of his ability, and which experience shows, will be the means of eliciting much useful information for the public. These questions are arranged with great care and skill, and embrace most of the important topics of farming, as practiced in New England.

For the best rotation of crops, on not less than 2 acres, and for 3 or 4 years, commencing when in grass, $75. A full history of the culture during this time is required.

For the best acre of Carrots, orange or white, $40,—best acre of Mangel wurtzel, $30,—best acre of Sugar Beet, $30,—best acre of Ruta Baga, $20,—best acre of Cabbages, $20. For the best half acre of each of these, one half the sum named per each acre.

For the greatest quantity of vegetables raised, (grain, peas, and beans excepted,) regard also being had to value, and expense of cultivation, $30.

For the most successful experiment in the improvement of pasture grounds, $30.

For the best experiment in draining and reclaiming wet lands, not less than 3 acres, $50.

For the most satisfactory experiment with green crops as a manure, $50.

For the best newly invented or improved agricultural implement, from $10 to $50.

For the best mode of rearing, feeding, and fattening cattle, $20.

For the best conducted experiment on the use of lime as a manure, $50.

For the best experiment with bone manure, $20.

For the best improvement on the common subsoil plow, $50.

For the best form for a farmer's Diary and Account Book, $30.

For the best apple orchard, $50; second best, $30.

For the best practical treatise on injurious insects, $100.

Claims for the premium on Crops, Manures Experiments and Inventions, with the required evidences, must be sent free of expense, to Benj. Guild, Esq. Boston, on or before the first of December next. All premiums awarded will be paid on demand.

Massachusetts, it will be seen, takes the field strongly; and the experience of this, her leading Society, fully justifies the movement. The Old Bay State deserves much credit for her legislative aid to agriculture, and the result shows that the seed she has so liberally sown, has fallen into a rich and productive soil. Massachusetts knows, and is willing to trust her farmers; let other states profit by her example.

Take things always by their smooth handle.
That life is long which answers life's great ends.

FOREIGN INTELLIGENCE.

In Europe, as in this country, there is a constant improvement in the character of the periodicals devoted to the interests of Agriculture, as regards both its science and practice. In perusing the valuable papers which appear in the Journal of the Royal Ag. Society, Qr. Journal of Agriculture, Farmer's Mag., New Farmer's Journal, &c., we feel a deep regret that we cannot invite our readers to the same rich banquet, and we have been often tempted to commence a Journal of Foreign Agriculture, which should embrace the most important papers of the foreign magazines. We cannot but think, that a work of this kind, with a capable conductor, would meet with ample support. From our late files of foreign papers we have compiled the following items:

Mr. Colman.—At a special meeting of the Council of the Royal Agricultural Society on the 11th of May, Mr. Colman was present, and took his seat as an honorary member. At a subsequent meeting Mr. Colman addressed the meeting, thanking them for having made him an honorary member of the Society. He also presented the Society copies of Prof. Hitchcock's Geology of Massachusetts—three of his Reports on the Agriculture of Massachusetts—Mr. Ellsworth's Report to Congress last winter—the annual report of the Monroe Ag. Society; and on behalf of Dr. Mease of Philadelphia, the last vol. of the Memoirs of the Phil. Ag. Society, for which the Society voted him "their best thanks."

Abortion.—An instance similar to the one mentioned in our last, as having occurred in the herd of Mr. Prentice at Mount Hope, is mentioned in the Dublin Farmer's Gazette. A correspondent states that he "has a valuable stock of ten milch cows; that four of them calved safely, but within the last six weeks five have in close succession slipped their calves, and the remaining one has every appearance of doing so." In answer to the call for information as to the best means of preventing a recurrence of this calamity, the editor of the Gazette says: "A case similar to the above appeared in this journal a short time since, which we hoped would have attracted the attention of some person capable of giving a reasonable cause for so distressing a calamity, and of recommending some means of preventing its recurrence, but hitherto we are sorry to say it has failed to do so."

Royal Ag. Society of England.—This Society has now 7,270 members, of which 101 are denominated life governors, who pay $250 each—206 annual governors, who pay $25 annually—399 life members who pay $50 each—6,551 annual members, who pay $5 per annum. Its receipts in the three years of its existence, have so far exceeded its expenses that the Society has invested about $35,000, the interest of which now forms a part of its permanent income. The Fair of this Society, for this year, is to be held at Derby, commencing on the 11th of this month.

Manures.—At the present time there is no subject attracting, deservedly too, more attention than that of the preparation and increase of manures. A large portion the articles in the May No. of the Farmer's Magazine, are devoted to this subject. It is stated that one ton of straw will make three tons of manure, and that a cow will produce about nine tons of solid manure in the course of the year. In an experiment by Mr. Barton in Stafford, in the culture of wheat, the increase in the value of the product of an acre, over that of an acre without any manure, was as follows:

1¼ cwt. of guano per acre,	$15.32
1¼ cwt. guano and nitrate of soda, in equal parts,	11.84
1¼ cwt. nitrate of soda,	7.13
4 tons caustic lime,	9.49
Lime and salt, mixed,	none.

In several experiments made in Scotland, in raising turneps, the guano appeared to equal advantage in comparison with dung and with bone dust, the latter being the best fertilizer heretofore used for turneps.

Salt and Lime for Grass Lands.—A correspondent of the Mark Lane Express, says that he has "found great benefit from sowing *two* bushels of lime mixed with *one* of salt, at the rate of *twelve* bushels per acre. If more is sown it has a bad effect; in fact, it would destroy rather than improve the quality of the herbage. I have always found my given quantity very effectual in enriching as well as increasing the quantity."

Bone Dust.—Great quantities of bones are every year shipped from this country to England, to be ground and used as manure, principally for the turnep crop, for which bone dust is found to be the best of all manures. We see it stated that the sum of $50,000 has been paid in a year, by the single district of Strathmore, for bone dust. It is used on dry or calcareous soils, and is considered inefficacious on heavy clay soils.

Charcoal.—A correspondent of the *New Farmer's Journal*, states that during a sojourn in one of the central departments of France, he learned that one of the most productive farms in the neighborhood was originally very sterile; but the proprietor having some years before given it a light dressing of charcoal, from that time it yielded crops exceedingly fine both in quality and quantity. On his return to England, he determined to try the experiment on his own lands, and the result proved highly satisfactory. He says:—"After various experiments I ascertained that before applying the charcoal it should be crushed, when it may be spread over the land like lime, but as soon as possible afterwards it should be well moistened with soft water, by means of a watering cart. The expense per acre, is a mere trifle, in comparison with the permanent improvement effected, which on grass land is truly wonderful. But this is not all. I am quite satisfied that by using charcoal in the way described, *rust in the wheat crop will be effectually prevented;* for I have found that in two adjoining fields, one of which was 'coaled,' and the other manured with farm-yard dung, the wheat in the latter was greatly injured by rust, whilst that growing in the other was perfectly free from it."

Experiment tried on three years old pasture in Scotland, by Wilson, of Aucheniden, furnished to the Philosophical Society of Glasgow. Two hundred perches were divided into ten lots, of twenty perches each, and treated as follows, yielded the following produce:

Lot 1—Left untouched,	420 lbs.
2—2½ bbls. of Irish quick lime,	602
3—4 cwt. lime from Lias works,	651
4—4½ cwt. wood charcoal powder,	665
5—2 bushels bone dust,	693
6—18 lbs. nitrate potash	742
7—20 lbs. nitrate soda,	784
8—12½ bolls soot, (equal to 4 bush.)	819
9—28 lbs. sulphate ammonia,	874
10—100 gal. ammonia liquor, from Lias works, at 5 deg. Tweddle,	945

The value of the applications was 5s. for each lot, or at the rate of 2l. per Scotch acre. All the articles were applied on the 16th of April, 1841. The grass cut and made into hay in the following July.

Guano.—At a meeting of the Royal Ag. Society, on the 10th of May, Mr. Davenport communicated the following results of trials made the last year, with guano, on his farm:

"*On Meadow.*—One acre sown with 3 cwt. of guano and 3 cwt. of gypsum: crops when ready to stack, 2 tons 18 cwt.

"One acre sown with 2 cwt. of guano and 2 cwt. of gypsum: 2 tons, 8 cwt.

"One acre sown with 2 cwt. of guano only: 2 tons.

"*Turneps.*—One acre of turneps, 4 cwt. of guano, and 4 cwt. of gypsum: 30 tons produce.

"One acre of turneps, 2 cwt. of guano and 2 cwt. of gypsum: 27 tons.

"The difference between an unmanured acre, and one manured with 3 cwt. of guano and the same quantity of gypsum, was 27 cwt. of hay additional.

"The guano was of the best kind, which now sells at *10l.* the ton. Its effects on green-house plants, when sufficiently diluted, is great, but it is easy to do mischief by excess. Water is the best vehicle. When sown, it should be in showery weather. Altogether, it appears to be the cheapest manure known, and strong soils suit it best."

American Flour and Pork.—After the passage of the late Corn Laws, by which provisions from the United States were admitted into Great Britain at such a duty as to admit of their shipment to a limited extent, it became very fashionable for the sticklers for the corn laws in England, to denounce them as unfit food for honest John Bull, and especially was our pork,—which was said to be fattened upon sheep which died for want of ruta bagas, which could not be raised here,—looked upon with abhorrence. Now, however, when it is feared that amendments will be made to the corn laws, still more favorable to the introduction of American produce, the tune is changed, and all at once our flour and pork become the best in the world. At a corn law meeting at Chelmsford, one speaker pronounces our wheat a very superior article—so hard and fine that it may be shipped to any part of the world, and kept a twelve month without danger of sweating. Mr. Grove said, "the quality of American flour was so superior to our own, that it would take as much more water, and the duty being 1s. only, would make the sack of flour at a premium." Mr. Du Croz said, "the American pork is the best in the world; it is principally fatted on maize, and at certain periods of the year nothing can be finer."

Soiling.—The practice of soiling is recommended by the Rugely Farmer's Club, 1st, for the extra quantity of manure that can be made: 2d, the saving of food. These they consider are equivalent to the expense. The Wirril Farmer's Club adopted the following resolution:—

"That it is the opinion of this meeting that the best method of feeding farm horses and other cattle upon the green produce of the farm, is by mowing and feeding in the yards, commonly termed soiling, and at the commencement of the season to cut it with a portion of hay into chaff. And for horses, lucerne is strongly recommended for its substantial quality, and as yielding early and successive crops, and being exceedingly healthy and nutritious food."

Horse Carts.—"I should add," says Mr. P., "that on these 1500 acres no wagon is used. The harvest is brought home, and the manure carried out upon *single horse carts;* nor in this respect is there any departure from the practice of the neighborhood, for I find that in Bedfordshire, and part of Herefordshire, the farmers use nothing else."

The Turnep Fly.—A 'Tanner' in the London Farmers' Magazine, describes the manner in which he exterminated the fly, on a patch of turneps in his garden. The seed came up well, but was attacked by myriads of the fly, and when noticed by him, half the plants were destroyed. He immediately applied for a remedy some stale liquid from the lime pit in his tanner's yard. The application was effectual, and the next day scarcely a fly was to be seen, and not one on the plants visited by the contents of the water-pot. He was apprehensive at first that the effect of the liquor might be fatal to his plants, but a rain washed off this sprinkling of lime and animal matter in combination, and the plants instead of suffering grew with rank luxuriance. He was induced to apply this liquid from having observed that however stale and fetid, animal life could not exist in it. All farmers who are troubled with insects on their vegetables may not have access to a tanner's lime vat, but he may prepare a vat with a few bushels of lime and water, or still better the wash of his yards, and into this let all refuse animal matter he may have about the farm, dead lambs, pigs, fowls, sheep, or all carrion, be cast, or the entrails of what are killed for use, and he will soon have a preparation equal in efficiency as a preventive of insects, or as a manure, to the tanner's liquid. This is a matter which should arrest the attention of all farmers, as by it nuisances are converted into useful matters, and the farm kept free from their existence.

Turnep Fly.—I have found that lime lightly strewed over turneps (just up,) before the dew is off the ground in the morning, most effectually and invariably preserves the crop from the fly, &c.—*Cor. of New Farm. Journal.*

Winter Feed of Cows in Flanders.—The cows are principally fed on roots, such as carrots, turneps and potatoes. These are chopped up together in a tub, and some bean meal, rye meal, or buckwheat meal is added; boiling water is poured over this and allowed to cool, or the whole is boiled together in a copper, when fuel is not too scarce. Of this mixture, called *brassin,* two pailfuls are given milk warm, morning and evening, to each cow; and this, with a little wheat or barley straw, is their only food during the whole winter.

Irish Ag. Societies.—Following the example of England, a National Ag. Society was formed in Ireland in 1841, since which no less than 83 auxiliary or district Societies have been organized, all of which appear to be in a prosperous condition, and exerting a highly salutary influence on the agricultural interest of that country.

The Rattlesnake.—At the monthly meeting of the Highland and Ag. Society for May, Professor Traill referred to the singular property attributed to the white ash, of driving away rattlesnakes. In an experiment made to test the reality of this alleged property, it was found that when a branch of some other tree was presented to a rattlesnake, it merely had the effect of irritating the reptile, and causing it to dart forward as if to resent the annoyance; but no sooner was a branch of the white ash thrust against it, than it showed symptoms of the greatest uneasiness, made an effort to escape, and seemed paralyzed in all its motions. This was repeated so often as to leave no doubt about the remarkable effect of this tree on the rattlesnake.

A New Churn.—It having been found by experiment, that the greatest quantity of the finest quality of butter is obtained from cream at a mean temperature of 55° Farenheit, Mr. David Ritchie of Edinburgh, has made a churn which seems well calculated to accomplish the object of keeping the temperature of the cream at the desired point. It consists of one cylinder placed concentric within another, so that water, either cold or hot, as the case may require, may be put into the outer cylinder.

Feeding Poultry.—Prof. Gregory of Aberdeen, observes, "As you keep poultry, I may tell you that it has been ascertained that if you mix with their food a sufficient quantity of egg shells or chalk, which they eat greedily, they will lay, *cæteris paribus,* twice or thrice as many eggs as before. A well fed fowl is disposed to lay a vast number of eggs, but cannot do so without the materials for the shells, however nourishing in other respects her food may be; indeed, a fowl fed on food and water, free from carbonate of lime, and not finding any in the soil, or in the shape of mortar, which they often eat on the walls, would lay no eggs at all."

LAND IN SIGHT.

We believe that there has not been a time, since the general tumble down of prices, and the consequent agricultural distress, when the prospect of relief was so fair as at present. Farmers have been gradually, but certainly, surmounting their difficulties, and already they begin to breathe more freely. Driven to retrenchment and economy, what at first seemed an evil, is found to have been a positive good to all classes of society; and if the severe lessons the community have been taught have their proper effect, we shall find many days of prosperity are yet before us. Debts heedlessly contracted, and without any rational expectations of meeting them, were the great cause of our personal or individual difficulties. The farmer has been slowly working his way out of these; and now better prices for his produce is coming to his aid, to complete the work. We would not intimate that the prices of 1837 are to be expected. They ought not to be desired, as they are inconsistent with a healthy and safe condition of things; but every thing indicates a gradual restoration of confidence, and prices that will be remunerating. We now as a nation sell more than we buy; our manufactories are getting into successful operation; new markets are opening for our agricultural products; specie instead of gewgaws is flowing in upon us; money is becoming plenty for those who have any thing to purchase it with; and there is a general feeling that the "dark day" is at last passed. We have only to avoid the errors of the past; to see our way clear before us; and as a nation or as individuals to purchase nothing we do not need, and pay down for what we do purchase, and we may reasonably hope, that if we do not become rich, we shall not be obliged to incur the disgrace of repudiation.

CANADA THISTLES—ABORTION IN COWS.

Messrs. Gaylord & Tucker—By the enclosed slip from one of our papers, you will perceive some of the farmers of Delaware have become much alarmed at the appearance of that pest, the "Canada Thistle," upon our lands.

From occasional articles in the Cultivator, I find a difference of opinion as to its treatment, and mode of ridding the ground of it. To us, in this portion of the middle States, it is comparatively a stranger, and from this cause has slipped in here and there, and if not immediately attended to, we apprehend it will spread with much rapidity.

We have pretty effectually succeeded in alarming our agricultural friends for an attack upon it, and having promised them the best light I could obtain on the subject, with a view of laying it before them, I must appeal to you and one or two northern friends, to advise me, in your opinion, *the* most approved plan of rooting out and preventing its *return*. On this subject we shall be pleased to hear from you at your earliest convenience.

I have just received the June No. of your valuable paper: it well sustains its high character and credit. Your notice of the death of our valued friend, **James Garnett**, is highly appropriate. At this time, in the great revolution that is now going on in agriculture in the United States, this valued and general officer and leader will be much missed. Whilst we revere his memory, commemorate his worth, and revert to his useful life, let us not despair that other "*Commentators*" will arise, and fill up the gap that is now made. Peters, Buel, and Garnett, all ripe and well filled shocks, are gathered and garnered away, and their last furrow has been turned, but the seed they have sown will spring up and continue to flourish to the latest time.

The article "Abortion in Cows," is at this time, in our country, of deep interest. Let this mysterious matter be kept before the intelligent husbandmen of the U. States. I do not know that the real cause is yet at all discovered. Certain it is, that as an epidemic it becomes an alarming thing to the owners of favorite animals and whole herds of cattle. We ourselves have suffered severely within the last year from this identical result, in a herd of 80 or 90 Devon N. York cows, kept for the purpose of a vealery; some 20 or 25 slipped their calves last spring, all in good condition and had been well wintered; this spring the same calamitous results have obtained, and I am now certain that the only remedy to prevent its spread among the herd, is immediately to remove the animal from your farm and neighborhood—of course to find out and bury or put out of the way, the dead fœtus and all the secundines, and to feed off all cows and heifers that are at all addicted to abortion: for where one cow aborts, it is directly perceptible by instinct—the sense of smell, or some cause not yet fully ascertained—the sympathy of the whole dairy is aroused—an unnatural fever rages amongst them—cows with calf again seek the bull, or are constantly seen jumping each other; an unnatural state of excitement thus brought on, will account in many cases for the frequent miscarriages, when in fact little or no disease prevails; and from the experience I have had, (too much, to my sorrow,) I have detected no ill-conditioned health in the animal, beyond temporary excitement and slight uterine inflammation, previous to and just after the abortion. Still I have no doubt there are many *sporadic* cases of aborton among cows, from a *diseased* state of body, from some organic defect, or poor keeping, or noxious food or weeds. But from what I have seen so far, my views are to get rid at once—be they high priced Durham, the favorite Devon, or the lowly esteemed cattle—if they abort, turn them off and look to a new stock altogether. I am exceedingly sorry to hear of Mr. Prentice's losses; several large dairymen near Philadelphia have suffered likewise within the last year, and I hope considerable attention is being turned to the subject by practical and intelligent men, and that ere long the true causes of abortion among cows, as well as brood mares, (and I think they will be found to be nearly the same,) will be fully ascertained, and thus much that is valuable and highly prized among us, be saved from loss and destruction. But I have entirely digressed from the true object of this letter, which is simply to ask your views and best experience of yourself and correspondents, on the destruction and eradication of the "Canada Thistle." **James W. Thomson**,

Pres't New Castle Ag. Society.

Newcastle, Del., June 15, 1843.

The remarks in the above communication on the subject of abortion in cows, will arrest the attention of cattle breeders and dairymen. Few are aware of the extent of the losses arising from this source. We are informed that several extensive dairymen in the vicinity of Philadelphia lost the greater part of their calves the last year from this cause; and we are promised a paper on this subject for our next No., from a gentleman in a neighboring county, whose experience in the matter will enable him to communicate valuable information to cattle breeders.

We trust that the farmers of Delaware will be awake to the subject of the Canada thistle, which we regret to learn from Dr. T.'s letter has made its appearance in that region of country. If there is one weed more than another, which may claim pre-eminence as a pest to the farmer, it is the Canada thistle. Much has been said and written on the thistle, and a multitude of remedies recommended, but all may be summed up in a few words. Never allow the plants to breathe—or, in other words, never allow a plant to form leaves. Cut them up at once, not only once but as often as they appear, and their race will soon be run. We have destroyed many patches of the thistle in this way, and it is the only one in which we have succeeded. They may be checked by mowing, &c., but they are rarely killed. Union of action in any district of country, when the thistle first appears, is all that is necessary to extirpate it; but many of our farmers know to their sorrow, that it is of but little use for them to attempt to keep their farms free, while perhaps their next neighbor does nothing, and not only allows them to spread by their roots, but to ripen their seeds, to float off on every wind, to lodge wherever the ground is broken. On no account should a thistle be allowed to ripen its seed; and they should be cut earlier than they usually are, or there will be juices enough in the stalk to perfect the seeds so far as to give them the power of germination. Whenever a thistle appears in a field, mark the place, and examine it every few days or weeks, to see that no stalks spring up; cut them off as deep as possible below the surface, or dig the ground over, and thus exterminate them root and branch. No half way measures will do any good, and the more widely this is understood and acted upon, the better it will be for the farmer.

WARTS ON COWS' TEATS.

Editors of the Cultivator—We are much troubled the present season about milking, by nearly all our cows having warts on their teats; some nearly one solid mass, which crack and make them very sore. If you or any of your numerous correspondents can inform us of a cure through the agency of the Cultivator, they will much oblige **A Subscriber.**

Glen Cove, N. Y., June 4, 1843.

Warts are of two kinds; the first only arising in the outer skin or cuticle, and frequently quickly spreading over a large surface; the other penetrating deeper, and fixing themselves more firmly. The first may generally be removed by rubbing the skin with camphorated olive oil; the last are best destroyed by a ligature. The best substance we have tried for this purpose, is India rubber drawn out to a thread, and secured around the base of the wart. In a few days the wart perishes and falls off. Touching the warts with a strong solution of nitrate of silver will also remove them, but it is more apt to leave the surface sore for a time. An English journal states that a strong wash of alum will cure warts of every kind on the bags or teats of cows, but we have not had an opportunity of testing the value of this remedy. If any of our friends are acquainted with a cure for this difficulty, they will oblige us by communicating it for the Cultivator.

LIVE OAK.

Messrs. Gaylord & Tucker—I should be gratified if you would inform me through the Cultivator, whether the Live Oak can be grown in Lat. 41° north.

L. Durand.

The live oak (*Quercus virens*,) is strictly a maratime tree, as well as an American one. Commencing near Norfolk, in about lat. 37°, it is found on the coast of the Atlantic around the peninsula of Florida, and along the gulf of Mexico to the Sabine, and in a few instances in the province of Texas. The coast of Florida seems the most congenial to the growth of this valuable tree; and it is hence right to infer that it cannot succeed in a higher latitude than it is now found on our coast. In England, with winters much more mild than ours, in lat. 41°, it has been found impossible to grow it in the open air.

"**Messrs. Editors**—Pray what do you think of 'Mesmerism?' The sleepers say many strange things. Among others, they assert that the ravages of the wheat weevil may be avoided by sowing a bushel of plaster, mixed with two lbs. of sulphur, on each acre of wheat, when it first comes out of the ground. **Skeptic.**"

As to the first part of our correspondent's query, we must say, that as claimed and expounded by some of its professors, and particularly so far as regards clairvoyance, or "second sight," we consider mesmerism one of the greatest humbugs extant. That there is such a thing as magnetism, or what we call such, and animal magnetism, or electro-magnetism, we have no doubt. It can be traced every where; but that it confers the gift of prophecy, we are yet to be convinced. We think, however, the guess as to the effect of sulphur on wheat is a shrewd one, and it is perhaps possible that it may render the plant so offensive to the fly, (for that, we think, is what the writer means,) as to drive it from the field, or prevent its attacks. We hope at least the experiment will be tried, and if successful, let mesmerism receive all due credit.

DAMPNESS OF BRICK BUILDINGS

Messrs. Editors—Several of our citizens have experienced a good deal of inconvenience from dampness on the walls of brick buildings—some to such an extent that the paper has rotted off. Various expedients have been tried, but none except lathing and plastering, (leaving a space between the brick and the plastering,) seems to have fully answered, and that remedy is an inconvenient one. Can you give your readers any information on the subject? How would a coat of cement (water lime) answer? Any information on this subject will be duly appreciated by at least one of your constant readers. **G. M. Eichelberger.**

We hope this inquiry will arrest the attention of some of our readers who are qualified to give the information sought, and we shall be happy to give it a place in the Cultivator, as the defect complained of is quite frequent, and is a serious evil. Lathing and plastering brick buildings in such a manner as to leave a space between the plastering and the brick, of what is called dead air, is generally practiced, we believe, where brick buildings are constructed as they should be. Brick walls conduct water from the foundations so freely, that when all external moisture is kept off by painting or otherwise, the walls will be damp, and unfit for residences. Stone houses, built of materials in which aluminous matter or clay is the cementing ingredient of the stone, are subject to the same objection. Houses of limestone are, it is said, free from this dampness; and some have proposed to cut off the ascent of moisture in brick walls, by placing a course or two of limestone on the top of the foundation walls, on which limestone the brick walls of the superstructure are to be reared.

THE LOCUSTS.

The appearance of the *Cicada septendecem*, or seventeen year Locust, among us, in great numbers, reminds us that the destined period of its duration in its imperfect state has arrived, and that it now issues from the ground, throws off its previous covering, and appears in a new form, to live a new kind of existence, short indeed, but the most important part of the whole; for in the few weeks which they exist in the winged state, the whole business of providing for the succession of the species is perfected, and these animals then perish.

As the name of this insect indicates, it appears among us but once in seventeen years, the whole intermediate time being spent in the grub state, principally beneath the ground. It must be remarked however, that although it is well ascertained that their regular period of arriving at perfection is seventeen years, yet they appear in different places in different years. It is therefore only from the progeny of a single worm that we are to look for their return at stated intervals in the same place. From what is recorded of them, it would seem that they appear in the perfect state almost every year, in some part or other of the United States.

The general opinion that they devour vegetation, is certainly unfounded, for the insect appears to have no such desires. After throwing off its original covering, it crawls upon some shrub, or even upon fences, and remains till capable of flying to a more suitable situation. In some instances they scarcely use their wings at all, but remain on the shrub where they first attach themselves. At this moment, our fields, where the shrub oaks and thorn bushes grow, literally swarm with them.

The mode in which these insects injure vegetation, is by puncturing the small branches for the purpose of depositing their eggs, of which every female deposits from four to five hundred. The oak is usually preferred by the insects for making the nests for her eggs; but they often attach themselves to other trees, and orchards frequently suffer severely. About the time the eggs are hatched, the branches begin to decay, and from the effect of winds or their own weight, fall to the ground, or remain hanging by the bark.

We would say to our readers, that the habits of these insects are worth observing, and it is an opportunity which will not soon again occur; go therefore and see in what manner nature has provided for the succession of this race. Be satisfied also, that they are not the devouring creatures which the name suggests, but that the injury they perpetrate is only done while preparing for the protection of their eggs, and providing for a succession of the species.

"THE GREAT AGRICULTURAL ERA COMING."

Under this head, the *Long Island Star*, after alluding to the labors of Liebig, Johnston and others, in connection with the application of the principles of chemistry to agriculture, says:

"A greater advance than heretofore, has, we understand, been latterly made. Dr. Wm. Valentine, heretofore better known in other departments than that of a chemist, in which he has been well educated, and for which he has a natural aptitude, has been lately devoting his whole attention to Agricultural Chemistry. By means of powerful apparatus, he has been analyzing soils with a view to applying the best means of fertilizing them, and has been learning the means of compounding by means of chemical agents, the best manures. He believes, (and other scientific men believe so likewise,) that he has acquired the art of enabling farmers to manure their land at one-tenth the ordinary expense of money and labor. His discovery has been patented, and he has recently been employed in laying vats on the farms of Wm. M. Weeks and others, at Glen Cove, and is calculating to extend his operations widely."

☞ Since the above was in type, we have had an opportunity of conversing with Dr. **Valentine**, on the subject of his researches in agricultural chemistry. He explained to us the substances used, and the manner of making his artificial manure. That it will prove a powerful fertilizer, we do not doubt, and are glad to learn that its merits are being put to a practical test by several farmers on Long Island, the result of which will in due time be made public.

We have received a note from Dr. Valentine, setting forth the advantages to be derived from his discoveries which shall have a place next month.

LEGISLATIVE AID TO AGRICULTURE.

THE subject of legislative aid to agriculture is one of so much importance, that we feel ourselves justified in occasionally referring to it. It is one which should certainly be kept before the farmers of the state, now that the experiment made is in such successful progress, as the friends of agriculture should be anxious to ascertain fully the operation of the present law, that they may act understandingly when the question for its renewal or discontinuance shall come before them. That the legislature will be governed by the will of the people, and that their opinion of the matter should be fully expressed, no one can reasonably doubt. That the present enactment in favor of agriculture has operated most beneficially, we have as yet heard no one dispute. The prejudices of many against the measure; prejudices honestly indulged, and originating in former errors connected with similar aid granted, though on conditions entirely different, have been done away; and perhaps no legislative act of the last five years, can be named about which there is so little diversity of opinion among all classes, as respecting the one by which a pittance of the state's revenue is devoted to the encouragement of agriculture.

There can be no question that the true cause of the efficiency of the present law in favor of aiding agriculture, is to be found in that provision which renders it necessary that the farmer should help himself, before he was entitled to expect help from the state. Experience in all matters of a similar nature, has demonstrated that there is no way in which the interest of individuals can be so soon secured, as by connecting the prosecution of the object with personal contribution. By rendering it necessary that County societies should be organized, and should raise an amount equal to that to which they were entitled from the state, the subject was brought home to the agriculturist, and the benefit he was to receive, made dependent on his own exertions.

There has been a strange opinion prevalent on this subject of aid to agriculture, which was that while all other classes were receiving more or less aid or protection from government, the agricultural part alone were to be left to their own resources. The merchant sails his ships and carries on his trade under the fostering protection of the nation; the manufacturer keeps his hammers and spindles active through the same influence; but it is expected that the farmer, he who furnishes freight for the one, and sustenance for all, shall go on with no encouragement from the public, while he bears the burden of taxation, and keeps the wheels of that government by which he is neglected, moving. This state has appropriated forty thousand dollars, or eight thousand dollars per year for five years, for the benefit of agriculture; and what is the result? We see associations springing up in every county to avail themselves of the grant. Public opinion is directed to the importance of agriculture, and a spirit of emulation and improvement is excited. Cattle Shows and Fairs exhibit to farmers the vast difference between good and bad implements, superior and inferior stock, and by bringing farmers in contact with each other, do away those feelings of distrust and distance, which are too often operative where seclusion and confinement to the farm prevail.

There is another reason why the state should lend its aid to agriculture, which is yearly becoming more efficient, and more deserving of attention. Scientific and practical improvements in agriculture, are not a less decided common public benefit, than in any other department of life; and while no one grudges the sums expended for the purposes of education, as such, by the state, the farmer can fairly demand the extension of those benefits conferred at the present time by the application of science to agriculture, through the influence of societies formed and fostered by the aid of the state. The sum demanded is so trifling, compared with the object in view, that it is surprising the granting the required aid should have encountered so much opposition; and it can only be accounted for by supposing that the objections had reference rather to the manner in which aid was to be given, than to the granting of the aid in itself.

The money drawn from the treasury to aid the cause of education, has for its object the elevation of the masses by the extension of knowledge, or the means of acquiring it, to all; it is to teach them their rights and their duties, and the best means of fulfilling them; to erect and point out to them a higher standard of moral and intellectual power than the one their fathers were accustomed to contemplate. It is to aid in the extension of knowledge most essential to all, that the farmer claims the aid of legislation. That alone seems adequate to spread the rich results which the labors of science, and the experiments the principles developed have produced, before those who are the most interested in them. No matter what the subject may be, if it is one of common benefit, commerce, manufactures, education, agriculture, all have a right in proportion to their importance, and without infringing on the rights of others, to look to legislation for aid. If there is a pursuit more ancient, more honorable, or more deserving of public aid than agriculture, it is still to be pointed out; if there is one in which the same sum will produce greater or more beneficial results, it is still to be shown.

We trust that in the examination of this subject, no person, certainly no farmer, will allow any considerations except such as spring from a regard to the public welfare, to have for a moment a place in his bosom. All party feelings, all narrow and contracted views, all sectional or personal jealousies, should be eschewed at once and forever. It is a subject in which all are interested, for the cultivation of the soil and its products, constitute the base of prosperity to all classes. Let the operation of the present law, in all its bearings and its consequences, be well and carefully weighed; and when the time arrives for its re-enactment, with such alterations as experience may suggest, we cannot believe that any enlightened legislator will be found among its opponents.

NEW NOTIONS.

UNDER the head of "*Cultivating ground without manure,*" or "*Wonders will never cease,*" an article, copied from the London Gard. Chronicle, has been going the round of most of our journals. It professes to give the results obtained by a Mr. Bieck of Germany, by which he has the art of growing the most luxuriant crop on the poorest lands, and at an expense so trifling, that for wheat or corn per acre, it will not exceed ten cents, and for rape, turneps, cabbage, &c. not over five cents per acre. Now in these days, we do not like to pronounce any thing impossible, unless it is to make an honest man out of a rogue; but the truth is, that notwithstanding all the certificates with which the story is fortified, we do not believe it, and for that reason have not before alluded to it. The preparation used for the seed is kept a great secret; but the fact that there is some preparation used, is demonstration that so far as any effect is produced, it is the consequence of manure. We are willing to admit that a large proportion of many plants is derived from the atmosphere; but this power of absorption or combination is derived from the soil originally, and that power is conferred and perpetuated by manures. That manures too may be used in a highly concentrated form, we have the most abundant evidence; but to assert that ten cents worth of even the most powerful can produce the effect described by Mr. Bieck, sounds to us most marvelously like the Multicaulis and Chinese Tree Corn stories. Lord Kaimes once told his man John, "that the time would come when a farmer would carry the manure for a field in his pocket." John shook his head. "Ah, I see you doubt my assertion," said his lordship. "Far be it from me to doubt any assertion your lordship may please to make," answered John: "I was only thinking that if the manure was carried out in one pocket, the crop could be brought home in the other." We are strenuous advocates of all real improvements, and such are always rational; but we do not advise our farmers to think of growing crops on flat bare rocks, or attempt the production of them on poor soils without manure. On the contrary we advise them to save and apply all the manure possible, a course at once agreeing with the laws of nature and the dictates of common sense.

CONVERTING PEAT SOIL INTO MEADOW.

FOR centuries since the settlement of New England, thousands, we may say hundreds of thousands of acres of bog, swamp, or peat lands, have been unreclaimed, receiving annual depositions of fertile matter from the neighboring hills or streams, yet returning nothing to the owner, and considered the most worthless part of the farm. Attempts were indeed made at times to subject some of these places to cultivation, but nine times out of ten the effort was a complete failure, and the ground was finally surrendered to the dominion of the coarse water bog grasses and the bushes that usually accompany them. More or less such lands are found along the whole sea board of the northern and middle States, and have been, as a matter of course, until within a few years, consigned to barrenness so far as any valuable product is concerned.

At last, science came to the aid of the farmer, and taught him the composition of soils and the best method of remedying their existing defects. It taught him that those spots which had so long been eye sores to every lover of agriculture, could be converted into the most fertile parts of the farm; that when relieved from the souring effects of stagnant water, and prepared by the mixture of other and firmer earths, a new and valuable vegetation would succeed to one that was worthless, and thus the productive capabilities of the country be vastly increased. This process is now yearly going into effect; and the heaviest crops of fine English grasses, roots and grain are now grown on lands that from time immemorial have been quaking bogs, or dangerous quagmires. We have rarely met with a better illustration of these facts, than in the report made by Col. A. MOORE, of Concord, Mass., to the Massachusetts Society for the Promotion of Agriculture, and who received the premium offered on farms in that State.

The first object of Col. Moore, on taking possession of his unpromising farm in 1835, was to drain his peat and bog meadows, and this he accomplished; but he found the ground did not become solid, that there was a tendency to allow the return of coarse grasses, and that attempts to burn the surface, though partially successful, endangered the destruction of the whole peat meadow. In this dilemma he commenced drawing on sandy loam from the sand hills that bordered the swampy lands. "This answered the purpose. The ground became firm, the grass seeds took, and the yield was altogether beyond my expectations." The process pursued by the Colonel is as follows. The land is first ditched and drained; the bushes cut off, or if large, pulled up; the soil well levelled, and about 400 cart loads of sandy loam spread upon an acre; 20 cart loads of compost manure are added, and thoroughly mixed by harrowing. On this, in the month of September, half a bushel of herdsgrass, and half a bushel of red-top grass seeds are sown, harrowed again, and the whole rolled smooth with a heavy roller. The Colonel says:—"I have now from 20 to 25 acres which have thus been reclaimed. The success I have had may be judged of by the value of the crops produced. Every year since this land has been reclaimed, whether wet or dry, it has produced on an average not less than three tons of English hay to an acre, which brings the highest price in market. In 1838, at the request of Mr. Colman, the Agricultural Commissioner, I weighed the first crop of hay on one acre of this land, and it weighed 7,610 lbs. About three acres of it during the present season, I have no doubt, produced five tons to the acre. It was mowed twice, and the second crop was so large that it was considerably lodged. One other fact may be stated. A few years ago I built a barn 30 feet by 40, and some of my neighbors laughed at me for it, and said, 'it is a good barn, but what are you going to fill it with?' That barn, together with one I have since built, 40 by 80 feet, as well as my others are now full, and I shall have to build more or stop reclaiming meadows.******I verily believe that the two first crops, have, in every instance, repaid the whole cost and expense of reclaiming."

Such are the results obtained by a skillful application of labor, and following out the system of mixing soils as pointed out by nature, and so clearly indispensable to productiveness. What has been done by Col. Moore may be done by others, and the annual produce and profits of similarly constituted farms be thus very greatly increased.

COST OF FENCING.

THE Peoria Press contains a paper on fences by a Peoria farmer, which, although more particularly applicable to western farming, contains some hints which we deem worthy of abridgment for the Cultivator. His remarks relate to sod fences, hedge fences, picket fences, and rail fences. To the first he objects for the following reasons:—1st. Cattle and the frost will throw them down—2d. They would be no defence against hogs and sheep if they stood—3d. Grass will not form a sward on an inclination so steep that cattle cannot walk up it; and 4th. They are immovable. He advises farmers, if they wish to lose their labor and their crops, to trust to a sod fence, and they will effectually do it. In his estimation they are not worth a groat. His objections to a hedge fence, are—1st. They are a stationary fence, and not suitable where the boundaries of farms change as frequently as in this country—2d. A prairie fire would totally destroy them—3d. The expenses of trimming and keeping in repair would quadruple that of a rail fence; and 4th. It would cost as much to make a fence to protect the hedge, as to protect the crop. Picket and rail fences are the ones now in most common use in that section of the country, and he estimates the expense of each as follows, which we think a pretty fair allowance:

"Cost of picket fencing for 80 rods in length, calculating you can get timber within six miles, so as to make two loads per day.

133 posts, 10 feet apart, at $1 50,	$2 00
264 flat rails, at $2 per hundred,	5 28
3,300 pickets, at $4 per thousand,	13 20
100 pounds nails,	8 00
Hauling 8 loads of rails, 4 of posts, 7 of pickets, at $1,	19 00
Sharpening pickets, dressing rails and putting up fence,	30 00
	$77 48

Cost of 80 rods rail fencing.

1,600 rails and stakes,	16 00
Hauling 48 loads, 33 to the load,	48 00
Staking and putting up at 31 cents per hundred,	5 00
	69 00

The Peoria farmer maintains that rail fence is the cheapest and best of any of the fences, as it costs the least in the first place; is most easily repaired or removed; is not liable to be blown down, or thrown out by frost; and should it be so, is easily put up again. Where there is a scarcity of timber (and that is the great difficulty in fencing at the west,) he proposes the cultivation of the locust. The following are his directions on this point:

"Plow and prepare your land as for corn; draw furrows each way three feet apart, quite shallow; then drop in the hill two or three black locust seed, having previously well scalded them, and cover with the hoe about an inch deep, pressing the dirt on the seeds; keep the weeds out the two first years, then let them grow, and in five or six years you may have as many rails made in such a piece of timber as you may choose. There is no trick or mystery about the matter, they can be as easily grown as corn. The late Jesse Bowles, of Adams county, grew one of the finest locust groves in the State, which would at five years growth have cut two rails lengths to each tree. If you are afraid the roots of the grove would spread, dig a ditch round it and the locust roots will not cross."

An acre planted in this way would produce 4,840 trees, but we presume that in actual planting, it would be found better to place the trees at a greater distance. They would not only grow better, but the timber would be sounder, and more durable. Locust is a tree, we are well aware, of most vigorous growth in favorable locations; but we think that an average of ten years would be a time sufficiently limited for the growth of two good rails on one tree, and that if they can be produced in sufficient numbers in that time, the prairie farmers will find them cheaper than any other.

Cattle should have access to salt at all times.

DICTIONARY OF TERMS USED IN Agriculture and its kindred Sciences.

MAGNESIA.—This is one of the earths having a metalic base called *magnesium*. Magnesia is usually procured for the purposes of commerce from the magnesian limestone, acted upon with the impure muriate of magnesia or the bittern of sea salt manufactories. Except in combination with limestone, it is of little use as an earth; but in some limestones of this country it constitutes 40 per cent of the whole, and consequently, where such stones are burned for agricultural purposes, it must exercise a decided influence for good or evil. The result of many experiments in England and in this country, would seem to prove that magnesia is injurious to vegetation, and that the magnesian limestones are to be rejected. At the same time it must be remarked, that the principal limestone used by the farmers of Pennsylvania and Delaware, are more strongly magnesian than any other known limestones in the United States, and no complaints have been made as to the effect. Epsom salts are the sulphate of magnesia, and are made by neutralizing diluted sulphuric acid with carbonate of magnesia. Baltimore is the great manufactory of this substance in the U. States. The magnesia is procured from the magnesian limestones of Pennsylvania, and from one and a half to two millions of lbs. of salts are made annually.

MAIZE.—A plant of the sugar cane family, yielding one of the most valuable articles for animal or human food known, and under the name of Indian corn, more extensively grown in the United States, than any other plant used for bread. It is a native of America, and was unknown in Europe until this continent was discovered. It has now gone the circuit of the globe, and wherever the climate has been found suitable to its growth (and its range is very broad,) it has taken deep hold as one of the most useful of plants. There are more than 40 varieties known, most of which are the result of fertilizing crosses, not more than two or three kinds being known at the settlement of the U. States. A new variety has within a few years been discovered in Texas, each kernel enveloped in a husk, and has been grown in the United States in a few instances. Maize is a plant that will endure a greater degree of heat than any other of our common cultivated plants, and without such heat for some months, will not succeed. The hot dry summers of the United States are found admirably adapted to this grain, over its whole extent, and the amount annually produced is immense. A warm, deep, rich soil is required for maize, and the crop varies much according to the soil, mode of planting, and after cultivation. One hundred bushels per acre, for several years, has not been an uncommon crop; and from 150 to 175 bushels per acre, have been reached. Maize is unequaled for the making of first rate pork; and when ground with the cob and fed to horses, is better than any other grain, oats perhaps excepted. If fed without the cob, it should be mixed with cut straw or hay, as alone the degree of nutriment is disproportioned to the bulk required to properly distend the stomach of the animal.

MANGE.—This is an eruption of the skin, attended with scurfiness, pimples, the exudation of a watery matter, and if not checked, the formation of extensive scabs. The itching is usually excessive, and the animal rubs the hair and tears the skin in its vain efforts at relief. It is one of the most serious diseases that attacks animals, and one of the most contagious. If it enters a stable, unless extraordinary precautions are used, the whole will be affected, for the slightest contact is sufficient to communicate the infection. The horse, ox, and dog, are all subject to the mange; but the disease in each, differs from the disease in the others, and cannot be communicated from one to the other. Thus the mange of the horse is never given to the dog, or that of the ox or cow to the horse. In this respect, the mange follows the same law as the itch in the human race, which it in fact much resembles, as the itch cannot be communicated to the animal, or the mange of the brute to man. Further, the same medicines that will cure this disease in man, will cure the mange in animals, and the same course of treatment that will be efficacious in one case, will succeed in the other. The remedy is easy and simple. One ounce of the flour of sulphur, one ounce of train oil, well ground together, and half an ounce common turpentine, may be used. The places affected by mange should be well brushed to clean off the loose scurf, then well washed with soap and water, and after being fully dried, the ointment should be thoroughly rubbed in with the hand or a soft piece of flannel. Corrosive sublimate, hellebore, and tobacco, are sometimes used, but great caution is required with such solutions or decoctions, and fatal results not unfrequently ensue when they are unskillfully used. We think with Mr. Youatt, that sulphur in some form is indispensable in every case of mange, and that in this and similar eruptive diseases, it is the sheet anchor of the veterinary surgeon. Some internal medicines may be given at the same time, such as flour of sulphur, or in the case of the horse, a mercurial ball. The mange most commonly originates from some half fed, half stabled animal, and then spreads to those with which it comes in contact. Animals that are kept clean, well fed, and stabled, rarely suffer from mange, unless exposed to contamination by the presence of diseased ones.

MANURES.—Whatever promotes the growth of plants, and thus increases the reward of agricultural labor, whether existing in the earth or air, is a manure; though the term is usually given to such substances as are applied to cultivated crops, or to the soils in which they are grown, That the growth of plants exhausts the soil is evident, and unless the matter which goes to their formation is returned to it in some form, barrenness is the inevitable result. Manuring effects this. It was formerly supposed that decomposed vegetables or animal matters, combined with certain earthy substances or salts, formed compounds soluble in water, which were taken up by the roots of plants and incorporated into their structure. It is now, however, generally supposed that the decomposed substances or manures do nothing more than furnish the requisite supply of carbonic gas, which is absorbed from the air and elaborated by the leaves, or absorbed by water and taken up by the roots, to undergo the same process of conversion into vegetable tissue. So far as the farmer is concerned, it matters but little which of these two theories is the correct one, or whether, (as we are inclined to believe,) they are both partly true, since the value and the necessity of the application of manures remains the same. There are in most plants, particularly the cultivated ones, certain peculiar principles, without a supply of which, in some form, they cannot arrive at perfection. The plant may be made to grow vigorously, but the seed, or that part which gives it its value, will not be formed or matured unless its distinctive principles are present. Thus gluten is a distinctive principle in wheat; and though a heavy growth of straw may be produced, unless the nitrogen or the ammonia necessary to its formation be furnished, the berry will be wanting. An excess of manures will destroy plants as effectually as the want of them, although where plants grow in a natural state, such a condition is not frequent, as the mixture of the manures with the earths, while they lessen the immediate effects, prolong their efficacy. As a general rule it will be found best to apply manures on or near the surface. It is the way nature adopts, and the carbon liberated is directly available by the roots or leaves. As the circulation of air is necessary to the continued formation of carbonic gas, a shallow covering will subserve every purpose better than a deep one. Indeed, it may be doubted, whether in every case of the application of manures, a surface use is not to be preferred, unless the manures are in a fresh state, or evolving ammoniacal or other gases, which require a slight covering of the earth to prevent their dispersion and comparative loss in the air. Messrs. Boussingault and Payen, have lately given to the public the results of an elaborate series of experiments to ascertain the relative value of manures, derived from the knowledge of the ammonia they respectively furnish; that substance, or rather nitrogen, being by these chemists, deemed the element of the greatest importance in manure. From their work, as copied in the Gardener's Chronicle, we extract a few of the items given. It will be seen that their estimate agrees very well with that which the practical farmer had allowed some of the same substances. The highest or most valuable in the list, are placed first. Feathers, hair, woolen rags, horn raspings, and dried insoluble blood, rank alike. Earth from graves, soluble blood, and dry muscular flesh, next. Pigeon dung. Salted fish and boiled bones. Bones with their fat. Moist bones. Oil cake. Poudrette. Blood. Glue refuse. Horse urine. Goat dung. Sheep dung. Pig dung. Horse dung. Seaweed. Clover roots. Heads of wheat. Wheat chaff. Cow urine. Cow dung. Some manures it is evident, act mechanically as well as otherwise; that is, their application partially changes the character of the soil, rendering it more suitable for the production of plants than before. In heavy clay soils, lime or sandy marl has this effect; and straw or other long manures plowed under, prevent that denseness frequently fatal to cultivation. Manures and their application, is perhaps the most important topic presented to the consideration of the farmer in cultivating the soil; and if he keeps steadily in view the necessity of returning to the soil as much or more than he takes from it, he cannot greatly err in its management.

MAPLE.—This is the name of an American tree, of which there are several species and varieties, the most important and valuable of which is the sugar maple, (*Acer sacharinum.*) This tree is found abundantly in the northern part of the U. States and in Canada, and large quantities of the best sugar is annually made from it. Sugar making constitutes a regular part of the farm work on those farms where the tree is found, and from 500 to 1,000 lbs. may be considered the average annual product of a common sugar works. Fortunately the labor required, falls at a time when other farming operations can not well be carried on, being the latter part of March, and first of April, and the time that the sap flows varying from two weeks to a month, depending on the state of the weather. The finest sugar is made from the sap that flows the earliest; and care should always be taken that the sap is always boiled down before the process of fermentation or souring commences. If this cannot be done, from the quantity on hand, fresh slaked lime should be thrown into the vessels containing it, which will neutralize all the acids formed, and secure the formation of sugar. In the latter part of the sugar season, after the buds begin to swell, the conversion of sap into sugar becomes more difficult, and that made is not as fine flavored as that earlier produced. The sap flows from the alburnum or sap wood, and this should not be wounded to the depth of more than an inch or an inch and a half. The practice of "boxing" the trees, or using an axe to procure the sap is a bad one, and will not be practiced by any farmer who expects to use his sugar works in coming years. From four to six lbs. of sugar are produced in favorable seasons from each tree; and one man and a boy will tend from 100 to 150 trees. Some of the other varieties of the maple produce those beautiful woods called curled and birdseye maple, and which are in such demand by cabinet makers.

MARE.—Some difference of opinion exists among farmers as to the respective value of mares or geldings for labor; but we think when every thing is taken into consideration, the farmer will deem the mare the most profitable. Mares are as lasting and durable as geldings; do not usually cost as much; and should any accident render them permanently lame, or unfit for labor, or even if remaining sound, they may be used for breeding. There is no necessity for the mare lying idle while with foal. Moderate labor, even to the period of foaling, will be better for her and for the foal, as she will be in more vigorous health than if idle. It is a singular fact that the Arabs, noted for the beauty and value of their horses, use none but mares. These they find more hardy, capable of longer endurance over the deserts than geldings, and prize and retain them accordingly. Mr. Youatt lays down as a rule, and it is one which we are confident every breeder of horses who understands his business will concede is correct, "that the value of the foal depends a great deal more on the dam than on the sire." Farmers, however, too often forget this fact, and in raising horses go on the supposition that every mare is a mare, and every colt a colt, whether they are worth raising or not. A little attention to this point would benefit the breeder by adding to his profits, and greatly improve the appearance and actual value of our farm horses.

MARL.—Various earthy deposits are known under the name of marl, but that which is the most common, and as a whole, of the most use to the farmer, is that known as calcareous marl, from its containing more or less carbonate of lime. Marl is usually composed of clay, sand and lime; and the proportions of the former, cause it to be called sandy or clayey marl. Nearly all marls abound in animal exuvia, such as shell fish, &c., and to these their efficacy as a manure may in many instances be attributed. But the most important marls of the United States, those of the green sand formation, and which experience has proved of such immense value on the sandy soils of New-Jersey and the region south, it is supposed from the analysis of Prof. Rogers and others, owe their efficacy to the potash or alkali they contain, which in some instances has reached 10 per cent. The clay banks in the vicinity of Albany, which spread over the sandy plains overlying them, or in their vicinity, produce such excellent effects, according to Judge Buel, contain from 25 to 30 per cent of lime, and therefore approach the nature of marl. The central parts of Onondaga and Cayuga counties, contain immense deposits of calcareous marl, nearly pure, and which we doubt not will hereafter be extensively used. At present such is the abundance of sulphate and carbonate of lime, not only in the immediate vicinity, but in the soils of those counties, that the necessity for such application has not become apparent. Marl, when dug from the pits, should lie some little time on the surface, to undergo aeration, and such changes as the atmosphere produces on soils, before it is used as a manure. The winter is the best time for this, as freezing pulverizes the clay parts more effectually than any other process can do. It may be applied to meadows, pasture lands or corn, and will be found useful in all cases, where lime is wanting, or mechanical alterations in the soil are required.

MEADOW.—The meadow is that part of the farm from which in temperate or northern latitudes, hay is made for the wintering of domestic stock. Under the old system of farming, the meadow was never disturbed by the plow, but for years was reserved for the scythe; consequently when it was possible, the meadow was found on low lands, or those naturally wet, and to preserve its fertility, much of the manure of the farm was applied in surface dressings, to the great detriment of the tillage land and the crops. Under the improved or rotative system of husbandry, every part of the farm is alike subjected to the plow and the scythe, and the meadow changes as often as the wheat or the corn field. To do this, every part of the farm is first made capable of growing any of the commonly cultivated crops, by draining, and while the average product of the whole farm is greatly increased, the quantity and quality of the hay made, will be proportionally improved. The grasses best adapted for meadows where a rotation is practiced, are the clovers, timothy, orchard grass, herds grass, and perhaps some of the foreign grasses may be found useful; but at present nothing known is equal to clover and timothy. In seeding down lands, too little seed is generally used, whether the land is to be meadow or pasture. Heavy seeding makes a closer turf, finer hay, sweeter and better pasture, and by giving more roots restores the exhaustion consequent on cropping, much sooner. In seeding lands they should always be thoroughly rolled. It will assist the covering and germination of the seeds, and render it level and smooth for the scythe. Lands intended for mowing, should not be trodden or poached by the feet of cattle in the spring, as such poaching renders the surface uneven, destroys the roots of plants, and is of little service to animals. Where, however, it is inconvenient to subject meadow land to the plow, and the grasses and the product decline, such meadows may be restored by occasionally giving them a liberal dressing of compost manure, sowing them afresh with a portion of the most valuable grasses, and giving them a very heavy harrowing in all directions. This will dislodge the mosses that clog the surface in old meadows, loosen the surface and promote atmospheric action, and give a new and more vigorous growth of grass plants.

Good housekeeping is always very essential.

Original Papers from Contributors.

LETTER FROM OHIO.

Messrs Gaylord & Tucker—In a late tour through the county of Licking, in this state, I noted the following observations, which may, perhaps, be worth perusal:

Cornstalk Sugar.—In the Yankee settlement of Granville, I found that several experiments were made in the manufacture of this article last year, with various success. I was shown a sample of sugar made by Mr. Aylesworth, which was well grained and well flavored, and only needed a better draining to make it an excellent article. Some little difficulty was experienced in getting the syrup to crystalize, owing, as is now believed, to the stalks having become too old before they were cut. Mr. Fassett, who was one of those engaged in the experiments, thinks the proper time for cutting is when the blossoms have all fallen from the tassels, or when the top of the tassel is beginning to die. The *saccharine* of the stalk is supposed to be then most abundant and in the best state. No difficulty was experienced in making first rate molasses, and samples were shown me equal, if not superior, to any cane molasses I ever saw. It would be an object to make cornstalk molasses, even if no sugar were made—it is such a nice article, and can be made so very easily. But the experiments of last year have sufficiently demonstrated the practicability of making sugar, and no doubt is entertained that practice and observation will furnish all the additional knowledge which is requisite for the perfection of the manufacture. The yield is very satisfactory. I understood Mr. Fassett to say, that in their most successful experiments it was equal to 700 pounds per acre, and he thinks that even 800 or 900 pounds may he obtained.

Live Stock.—Granville has been noted for good swine for a long time. Gen. A. Munson has an imported Berkshire boar, one of the best hogs I ever saw, that has done an incalculable good in this region. Mr. Fassett has excellent hogs. He is a veteran breeder and *feeder*, and it is said has not had an ordinary pig for 20 years. He has a large well shaped old sow, that he calls Bedford and Berkshire, that breeds the greatest pigs by Gen. Munson's boar, to be found in "all these diggins." In 1840, Mr. Fassett killed four of her pigs at the age of 10 months and 6 days, whose average dressed weight was 334 pounds—the largest weighing 350 pounds! In 1841, he killed but one or two of her pigs, they being mostly sold for breeders; but one was killed at 9 months old, that weighed upwards of 300 pounds. Last year, (1842,) he killed five of her pigs at 8 months and 15 days old, whose average dressed weight was $295\frac{1}{2}$ pounds—the largest weighing 320 pounds! Now here is proof by the *steelyards*. Mr. F. is a matter of fact man, and does not come to his conclusions by guessing. I do not remember having ever known so many pigs from one sow, giving such remarkable weights.

Mr. Brice, near Newark, has a Durham bull, *Hampton*, purchased of Mr. Van Rensselaer of your city, in 1841. He is a prime bull, and his progeny show that he will be a great improvement to the cattle of this vicinity. Mr. Brice has also a young Durham cow, (*Mary*,) which he bought of Messrs. Corning & Sotham, in 1841. She has likewise become a splendid animal, and though she has not had a calf since Mr. B. bought her, it is hoped she is now in a way to have one. Mr. B. has a Cotswold buck that he bought of Messrs. Corning & Sotham. I think he is the same whose likeness was once given in the Cultivator, and which a correspondent of the Farmer's Cabinet attempted to "*poke fun*" at, for having, as he said, in the likeness represented a "*natural piazza behind*." But whatever may have been the beauties or blemishes of the likeness, or the opinions of captious critics concerning it, the *sheep* is a noble one, and sheared $12\frac{3}{4}$ pounds *washed* wool last year! Mr. B. has been unfortunate with the South Downs which he had of Mr. Prentice. He has lost all his ewes from one accident and another, and has only the buck left. He is a very snug, good bodied animal, with excellent wool.

Gen. Thomas W. Wilson, near Newark, has two cows and a bull of the stock of Mr. Thomas Bates of Kirkleavington, England. The old cow, mother of the other, was presented by Mr. Bates, to the lady of Bishop McIlvaine of Kenyon college, in this state. It is good stock. They are light boned, thrifty, and good handlers. The young cow looks like a very good milker. The two cows have fine heifer calves, by Mr. Brice's bull.

Silk.—Hon. Elias Howell has a large cocoonery, and has done considerable in the silk line. He said they did not do much last year, but sold about $100 dollars worth of cocoons. He is intending to do much more this year. He can feed from five hundred to seven hundred thousand at a time. Mrs. Howell, under whose superintendence the cocoonery is managed, prefers the sulphur variety of worms, as being more healthy and requiring less care.

The silk business will undoubtedly become important in this part of the country. Some establishments which have been erected for the manufacture of silk, have done well. Mr. Gill of Mt. Pleasant, sold upwards of $9,000 worth of silk goods of his own manufacture, last year. He is enlarging his operations, and intends to increase his business considerably this season. His fabrics are *good*—some of them pronounced by competent judges equal to any imported—and are afforded at as low prices, according to the *weight*.

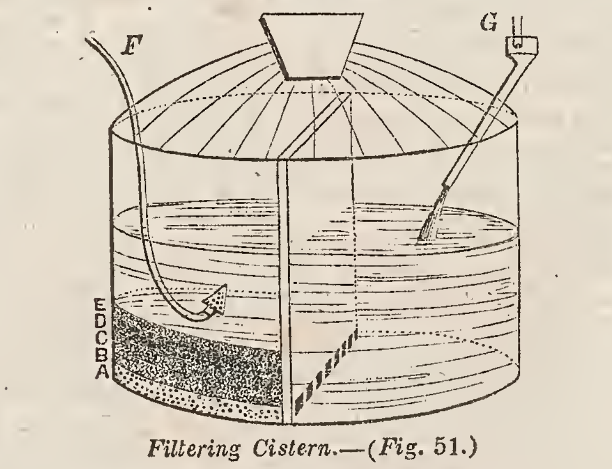
The kind of mulberry generally used, is the Multicaulis—there are some Italian. Of these, my *better half*, who has fed silk worms for several years, prefers the Italian. It is much hardier, puts out much earlier in the spring, produces more wholesome foliage, and from the abundance of lateral roots which can be obtained by heading down, it is more convenient for feeding. The Multicaulis is good for *late* feeding, but unless it is taken up in the fall, it will almost always die down to the ground in winter, and frequently die entirely. I should like to know if there is not some kind that will do better. How do the large leaf Canton and the Alpine, continue to do at the North? It is sometime since I have seen them, but my impression is, from what I have seen, that they would be valuable here. I wish some of your correspondents would let us know how these kinds succeed as to hardiness, quality and quantity of foliage, &c., and where they can be had.

Pigeon Roosts.—One of these curiosities is now to be seen in the vicinity of Granville. It covers (as I was informed,) an extent of some square miles, and is occupied by millions of pigeons. They congregate in such immense masses as to spoil the heaviest timber, breaking down the largest limbs. They feed on the beech nuts, and are very fat. Some people go to the roost and kill them for mere wanton sport. They stick one end of a long limber pole in the ground, and as the pigeons come into the roost, they swing it swiftly backwards and forwards, cutting down hundreds. They fly to the roosts in the latter part of the day in clouds, darkening the air, and stunning the ears with the sound of their wings. At such times, the slaughtering of numbers has no effect on the others; the hindmost rush on the others like Buffaloes running over a precipice. The nests are rudely made of a few sticks; sometimes there are twenty on a tree, and the trees as thick as they can stand. The *squabs* are said to be heavier about the time they are able to fly than they ever are afterwards, and are then considered most delicate eating. The inhabitants contemplate making a general feast of them about the time they come out of their nests. Where such myriads of them congregate, the ground receives a coating of manure which makes it very rich. Yours, &c.

Zanesville, O., May 28, 1843. S. Howard.

FILTERING CISTERNS.

Messrs. Gaylord & Tucker—About 2 years since, I was induced for various reasons to construct a cistern for filtering rain water, that it might be used for drinking and other household purposes. I had never seen one, and at the moment was unable to get any requisite information as to the proper mode of construction, and was thus forced to rely upon my own ingenuity. A trial for two years has convinced me that I was correct in my notions, and I would not now exchange my cistern for the most wells I know of, even for drinking. I submit my plan, hoping that it may be beneficial to some one at least of your numerous readers.



Filtering Cistern.—(Fig. 51.)

A. Gravel.
B. Coarse sand.
C. Fine Sand.
D. Charcoal.
E. Coarse sand.
G. Leader and strainer
F. Lead pipe leading to pump.

The cistern is built of brick, (8 inch walls,) holding 30 hhds.; it is of an oval shape, and about 7 feet deep. Across the center I built a partition wall, also of brick, 8 inches thick, leaving 8 apertures at the bottom, each $2\frac{1}{2}$ hy 3 inches; over which holes I put a zinc plate perforated with holes, acting as strainers. On the south side of this partition wall, I put in my filtering material as follows:—1st, a layer of strata or coarse gravel, say from the size of peas to that of hazelnuts, about 6 inches thick; then a strata of clean gravel or very coarse sand, about 4 inches thick; then a strata of fine beach sand 4 inches thick; then a strata of charcoal 3 inches thick, and covered it with another strata of gravel or coarse sand. The water from the roof passes into the north side, and finding its way through the apertures, forces upwards through these different materials to find its own level, and from this south part I take it by means of a lead pipe and pump. I should add that before the water enters the cistern at all, it passes through a copper box above ground, where it is strained through a wire sieve, and thus bugs and all insects of any size, are prevented from getting into the cistern altogether.

Newburgh, May 18, 1843. T. M. Niven.

CORNSTALK CUTTERS.

Messrs. Gaylord & Tucker—In some agricultural publication of the last year, I saw a description of a corn stalk cutter; there is another of different form in the last No. of the Cultivator, p. 35; permit me to describe another, which I think preferable, because cheaper, and in possession of every farmer. Take an old worn out scythe, cut it in two about four inches nearer the heel than point, then make the heel into a shank, upon which every boy can put a wooden handle. Take the other part of the scythe, and with a cold chisel separate the thin part from the back for about four inches, and cut it off, then get that part of the back from which you have taken the edge, hammered into a shank; and when handled, you have two of the most convenient and efficient corn cutters ever used.

I have often wondered why this simple instrument has not been described in some agricultural paper, (perhaps it has, though I have not seen it;) and I have sometimes thought that it was too simple an affair for a formal notice in a paper, and if you think so, act accordingly, but if you think it worthy of an insertion in the Cultivator, it is at your service and may benefit some one.

Yours respectfully,

L. A. Moody.

Willoughby, Lake co., O., May 20, 1843.

IMPROVED PICKET FENCE.

Messrs. Gaylord & Tucker—I am constructing a picket fence this year, on a somewhat new plan; and as I have never seen or heard of any just like it, I will forward you a brief description of it. It differs from the common fence only in the position of the rails, which are sawed three inches square and sixteen feet in length, supported by their posts, and the lower rail halved into the post, and the upper one halved on the top, so that the pickets, instead of being nailed on the flat side of the rail, are nailed on to the quadrilateral corner, and of course one corner of the rail points directly towards the zenith, and the opposite corner towards the nadir. The posts should be cased, in order to preserve the ends of the rails from decaying.

Fence constructed in this way, is more durable than that built in any other way; and the reasons for the fact are obvious. And first, when pickets are nailed on the flat side of the rail, the conjunction is not sufficiently close to seclude the rain; but on the contrary, acts as a *reservoir*, by which means the picket and rail are kept wet, and of course decay will soon ensue; whereas when nailed on the corner, there is but a *mere point* of surface, between the picket and rail, which will quickly dry out. Secondly, the surface of conjuction is so small, that paint, when applied, covers so much of the surface, that the oil will spread from each side and unite in the pores of the wood, and thus render it impermeable to water, if the paint does not cover the entire surface; and thus the picket is kept sound in every part. Thirdly, water immediately runs from the rails, and the powerful heat of the sun, by which they are checked, loses a vast deal of its influence by reflection; whereas when his beams pour almost perpendicularly on the flat surface, but few are reflected, and furthermore the whole surface of the rail can be covered with paint.

The nails should be driven just below the quadrilateral corner, through the picket, so that they will not be so much exposed to the action of the aqueous vapor of the atmosphere and the rain. After the pickets are nailed on, a *ribbon* one inch and a half square is nailed with double tenpenny nails, on the opposite side of the pickets, from the rails, *into* the rails.

The same position of the ribbon must be observed as of the rails. This not only adds to the beauty of the fence, but it holds each picket more firmly in its place, and prevents them from being knocked off by every little rap.

I will also give you a description of a *post* for board fence, which makes the most substantial, and I think, the cheapest fence, when we are at the expense of getting the posts sawed at the saw mill. The posts for such board fence, should be sawed four inches square, in the center of which there should be a place sawed one inch in thickness, to be taken out with an auger and chisel as far down as the surface of the ground. If it is desirable to have the ends of the boards pass each other, a piece of two inches in thickness should be taken out.

After the posts are set, the bottom boards are put in their place, and pinned firmly by boring an inch hole through the post and boards, and driving in a white oak pin. The upper boards are treated in the same manner.

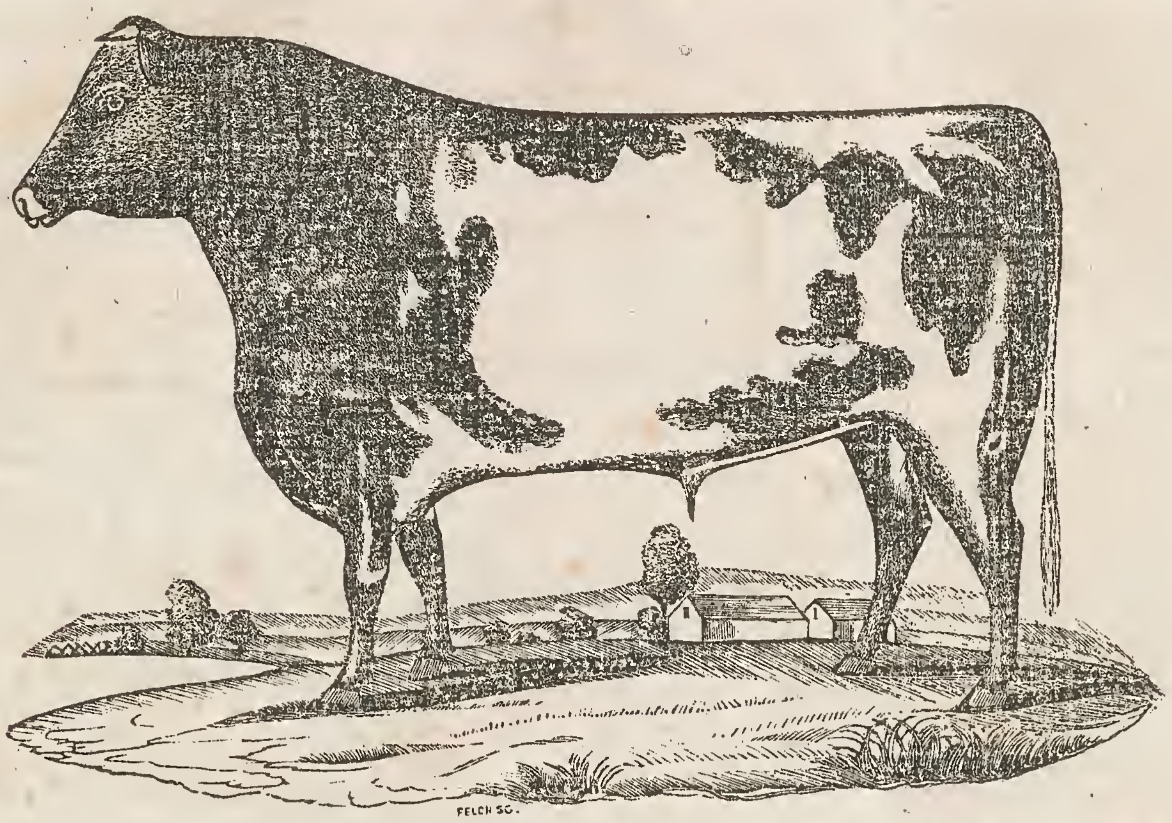
Such fence is far preferable in low ground, where the posts are thrown up by the frost, to fence made by *driving* the posts and *nailing* the boards: because, in the first place, a post which is set in the ground, will remain more firmly, a longer period of time, in its proper position—is not as liable to be heaved out by the action of the frost, as one which is sharpened and drove; and secondly, some part of the fence is raised farther than the other: consequently, the nails break and the boards fall to the ground; whereas when they are pinned at each end, if one post is lifted a little higher than the other, the boards turn on the pins, and still remain firm.

Posts driven in dry ground, may stand as well as if they were set; but in all cases, I prefer the latter mode.

When posts are split for fence, I hew them after setting; and on the opposite side of the board, from the post, set a ribbon one inch and a half thick, through which the pins are driven into the post. This is nearly as good as the whole post, but does not make so solid a fence.

S. E. Todd.

Lansing, Tompkins co., N. Y., May 25, 1843.



"DRAGOON," A SHORT HORN AND NEW LEICESTER BULL.—(Fig. 52.)

Bred by H. S. Randall, Esq., Cortlandville. Owned by J. R. SPEED, *Caroline, Tompkins co. N. Y.*

MESSRS. EDITORS—I herewith send you a portrait of my Short Horn and New Leicester bull "Dragon," (fig. 52,) designed and engraved by our talented young artist, Mr. J. H. Felch of Ithaca. Many of your readers will recognize it as a most faithful likeness, which will give great credit to Mr. F.'s skill as a painter and engraver. Dragoon is three-fourths Short Horn and one-fourth New Leicester; sired by Great Western, dam Unadilla by Hollis' bull, g. dam Mr. Adcock's imported Leicester cow. Great Western sired by Volunteer, dam Niobe by American Comet, g. dam Norah by Frederick, &c. See Herd Book for remainder of pedigree.

Dragoon is red and white, and a remarkably fine built animal, with great length of carcase. His "handling properties" are very superior. He possesses many of the valuable points of both the Durhams and Leicesters, and bids fair to make a splendid animal. He will be two years old in July. He received the first prize in the class of yearling bulls at the last Fair of our Ag. Society, and was exceedingly admired by all who saw him. Unadilla was bred by Mr. Robert Adcock of Otsego co., and is a most stylish and delicate animal, (half Short Horn and half New Leicester,) as all will admit who have had the pleasure of visiting Col. Randall's herd.

By the way, how is it that there is so large a portion of our farming brethren, who *will* not, or at least *do* not, take an agricultural paper? There are within a circuit of half a dozen miles about me, a large number of thrifty farmers, some of whom are worth thousands of dollars, and till hundreds of acres of land, who do not even take the trouble of attending our Agricultural Fairs; and as to paying a dollar a year for a farmer's paper, why such a thing would be thought by them outrageously extravagant. They prefer to go on farming in the old way, condemning every thing like improvement, and if they get their 25 bushels of oats, 45 of potatoes, or 20 of corn from an acre, they call it a "good yield," and are fully satisfied. Why, my dear sirs, although I have only been a practical follower of the principles laid down in agricultural works for about three years, yet I have already "improved my advantages" so as to be able to raise just three bushels of all kinds of grain, on the same ground that formerly yielded me but one, and with but little more expense; to say nothing of the benefits which I have derived from the improvement of my stock.

I would not be deprived the pleasure, as well as benefit, of reading the Cultivator, for ten times the subscription price. Now brother farmers send on your dollar, and try it for one year, and my word for it, *if you read it*, you will never wish to discontinue taking it.

Caroline, May 15, 1843. J. R. SPEED.

FARMING IN WARREN COUNTY, N. J.

WELL, Messrs. Editors, the *furor scribendi* has taken hold of your humble servant also, inclining me to do somewhat in return for the large amount of pleasure derived from the perusal of your journal.

Most farmers decline making contributions, because they have made no new discoveries—have no extraordinary stock or yield of crops—nor made any successful experiments. Now it is the observations and conclusions of men who keep their eyes open, whether for or against the thing or practice under consideration, that are wanted. But if these will not be furnished, the example of one of your correspondents, some months ago, from Chester co. Pa., might be followed; thus furnishing information respecting the soil and crops of their immediate district. But I proceed to apply the recommendation, and give you a short description of the farmers, farms, and produce of this county. And first of the farmers.

A large proportion, say two-thirds, if not three-fourths of them, own the land which they till, and this would lead us to presume a good degree of improvement; but we are still very much behind hand in this matter, though a better spirit has sprung up within a few years, and quite an advance has been made.

The modes of renting or leasing land are various; in fact, we have no well defined system of any kind. A lease for more than two or three years is a very rare thing. There is but little of the English system here, and but little land that is leased for money rent. The only settled thing seems to be that the tenant shall have house rent, fuel, pasture, and fodder for a cow or two, and a patch, not exceeding an acre, for a garden and a few potatoes. Sometimes the tenant gives only his labor for one-fourth of the crop, the landlord being to all the expense of team, utensils, feed, &c. Then again the tenant furnishes these, getting one-half or two-thirds, according as the bargain may be respecting taxes, improvements, and other matters.

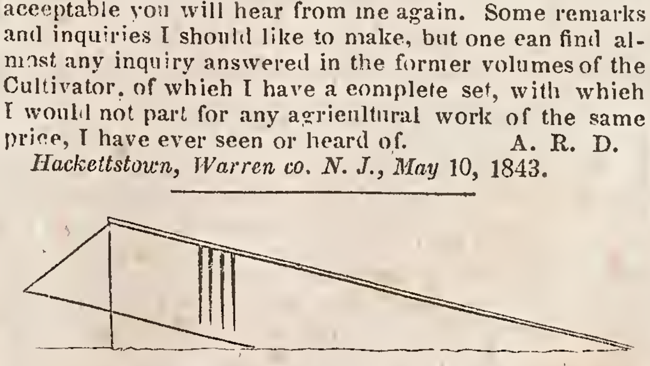
What the prospect then is, may be seen by an examination of the value of rents and yield of the lands of this district. It is supposed that about two-thirds of our region is limestone, and the remainder is made up of slate and granite formations. The bottom land, as usual in the vallies, has been the longest tilled, is in far the best state of improvement, and rates from $50 to $100 per acre. The hill or mountain lands present the best opportunities for investment, and are valued from $15 to $50 per acre, according to improvements. Our vallies are narrow and streams rapid, so that these last mentioned lands embrace the greater part of the county. The general size of farms is from one to two hundred acres, including from 25 to 50 acres of woodland.

The rotation generally followed, is, beginning with a clover sod, then corn or fallow, and winter grain, upon which clover seed is again sown. But most farmers sow oats and buckwheat, having less corn and fallow. In order to get a view of the produce and comparative profit, let us take a system varying a little from this, to which our lands are well adapted, and which will bring in the crops last mentioned. Take a farm of one hundred acres under tillage, cultivated as follows: 25 acres in clover, 25 acres in corn, 25 acres in oats or buckwheat, and 25 acres with winter grain. Our average yield with an ordinary season, would be as follows: $1\frac{2}{3}$ tons of clover hay, (42 tons on 25 acres,) 40 bushels corn per acre, (1000 bushels,) 500 bushels oats and buckwheat, or 20 bushels per acre, and 20 bushels wheat or rye, giving 500 bushels of winter grain. These at our average prices, would bring about $1,500, or yielding $15 per acre for the farm. In the above, the clover has been rated as though all were mown, but three-fourths of our pasturage is got from clover, and the meadow and cornstalks relied on for fodder. So the proportion counted as corn, would be partly in other hoed crops, potatoes, roots, &c. This has been done to avoid going into a tedious list of details, embracing the various small produce raised on a farm. From this it will be seen that the owner of land would get about double the income in a favorable season, that he could obtain at the highest possible rates for leasing land payable in cash.

There is a good deal of stock kept, so that but little hay is ever sold, more than to supply some scanty neighbor who has overrated his supply of fodder, and to furnish what may be wanted in the villages, which are very numerous through all this region. Improved breeds of swine have been considerably introduced, but our cattle and sheep are principally common stock, save now and then a few flocks, with some of the Durhams and Merinoes.

But this must suffice for the present, and if this prove acceptable you will hear from me again. Some remarks and inquiries I should like to make, but one can find almost any inquiry answered in the former volumes of the Cultivator, of which I have a complete set, with which I would not part for any agricultural work of the same price, I have ever seen or heard of. A. R. D.

Hackettstown, Warren co. N. J., May 10, 1843.



MOLE TRAP.—(Fig. 53.)

MESSRS. GAYLORD & TUCKER—Observing your disposition to admit into the Cultivator whatever is useful, and that you have given place to Mr. Darling's Mole Trap, I will give you a description of one (not my invention,) which recommends itself for its simplicity, and for the success of which I can vouch. Take a piece of inch plank six inches square, and in each end insert four spikes, six inches long, tapering from three-eights of an inch to a sharp point; set them one inch apart; you can drive them into the plank by boring with a small gimblet. If they should be found to extend too far across the mole track, the points can be bent together by the hand. Nail this piece of plank with the spikes into it, on to a board six inches wide and four feet long, at about nine inches from the end. Set your trap with setting sticks, such as the boys use in setting bird traps, except that the end of the long setter must be made broad and shaped like a paddle, and beveled. Set the trap at right angles with the mole track, and bring the spikes directly across the track. Trample the track with your foot, so that the mole in passing will elevate the paddle end of the long setter and throw the trap. Four or five bricks laid on the long board will give it weight enough to drive the spikes thro' the mole. Any blacksmith will make the spikes for four or five cents a piece, making the trap cost 37½ or 40 cts. It is a good plan to trample the track two or three feet on each side. If the trap falls you can see from which direction the mole has come. Dig down on that side of the trap, and my word for it, you will find the mole pinned to the ground. Let the upright setting stick be long enough to elevate the lower point of the spikes an inch above the ground when trampled.

B. J. GOLDSBOROUGH.

Cambridge, Md., May 14, 1843.

SPANISH MERINO SHEEP

MESSRS. EDITORS—I have just taken the fleeces from the backs of seven Spanish Merino sheep, which I purchased last fall, with which to commence the rearing of a flock. And as I think their weights rather clever, I have concluded to forward them to you. I had in all, ten; nine 3 year old ewes, and a buck lamb of last year's raising. I selected three of the best ewes, judging from quality and quantity of fleece, to exhibit in their coats, at our Fair in the fall, and sheared the remaining six ewes and buck, and the weights of their respective fleeces shorn and weighed in the presence of several of my neighbors, (and since re-weighed by my friend and neighbor Mr. C., who is the owner of a flock of several hundred Saxonies, and who rather doubted the report of my shearing,) are as follows:

No. 1.	Buck, 1 yr. old,	5 lbs.	4 oz.
No. 2.	Ewe,.........	4 "	8 "
No. 3.	"	5 "	2 "
No. 4.	"	4 "	8 "
No. 5.	"	4 "	14 "
No. 6.	"	4 "	8 "
No. 7.	"	5 "	4 "
		—	—
		34 lbs.	00

Averaging very near five pounds a head, aside from the tags. They were tagged before being turned into pasture in the spring, as were the other three, and the weight of all was just three pounds clean wool. Now, gentlemen, I am well aware that many of your readers will say at once, especially those who are sticklers for Saxony sheep, and perchance have got them for sale, that this was a small flock of choice selected sheep, and were fed high and well housed during the winter past: and that had I wintered a flock of several hundred, they would not have yielded more than half that amount. Well, as to the first part of the reply, it is true to the letter. They were a small flock, and well attended to during the winter; but no better wintered than stock of all kinds should be to make farming profitable. My sheep were fed plenty of hay three times a day, and oats twice, regularly throughout the winter, and had a comfortable shed open to the south, to which they could retire at their pleasure. And when turned into pasture in the spring, were in as good condition as when put up in the fall. Whether a large flock of the *same kind* of sheep treated in the same manner, would have fallen short of those weights, I am unable to say, not having made the experiment; but see no reason for supposing that they would not.

As to the Saxonies, in large or small flocks, I have had some experience, and with me they have never averaged over two pounds and a quarter.

Very respectfully, J. R. SPEED.

Caroline, June 12, 1843.

HOT AIR FURNACES.

THE "Subscriber" who inquires the cost of the castings for a Hot Air Furnace, is informed that *Silas Richmond & Co. of Macedon, Wayne co., N. Y.*, manufacture castings decidedly superior to those described a year or two since in the Cultivator and N. G. Farmer; a very important improvement consisting in a *double* ledge running round the edge of the bottom plate of each drum, forming a *trough*, which when filled with ashes, and the upper part of the drum placed upon it with its edge in this trough, renders the whole perfectly *smoke tight*. The drums are also made as thin as practicable, and cost less, at the same time they transmit the heat more readily. The weight of the whole castings, including ten drums, is about 1,000 pounds; the price, 5 cents per pound; consequently the whole would cost about $50, though something less is charged for the cash in hand. The drums weigh 40 pounds, and cost $2 each. J. J. T.

EXPERIMENTS IN VARIOUS MANURES.

Messrs. Gaylord & Tucker—I have been testing the last six years, a few articles as manures; should the result, being made known, edify or profit a few of your numerous subscribers, I shall feel myself compensated for this humble exertion to enrich the *field* of practical agriculture. The lots acted on were near a salt water creek, a dark and stiff clay soil of six inches, resting upon a bright yellow clay bottom or substrata.

Plaster.—I have sowed yearly upon clover, from half to six bushels to the acre, leaving out occasionally a few lands; have sowed it upon fallow for corn and tobacco; have used it mixed with ashes upon the hill for tobacco. I feel sorry to recant my former opinions, but upon repeated comparative trials, I have not seen enough to induce me to join at this time, in the general praise of gypsum; nevertheless, I shall still give it a farther trial.

Lime.—From the great quantity of oyster shells, the cheapness and ease of burning and spreading, I promised myself to make my land as rich as it could be; after using it in various ways and quantities, to my great disappointment, I am at present impressed with the idea that the smallest dust, (to my stiff soil,) will do the most good and the least injury. Some of my neighbors have used it by the thousand bushels, who are slow to praise it. I admire the binding quality of lime, plaster and ashes, and I am a great stickler for *liming* in the way of whitewashing, and do my full part in that line; the advantage is both perceptible and beneficial. To those whose ability is not commensurate with their pride, I would recommend the adhevise, the whitening, the preservative effect of a smearing of lime (color that for the roof to suit taste with red ochre,) to your buildings of *wood*, to close the pores and form a covering, and not your stiff clay, but when and where you may wish a bed of cement.

Marl.—From an old oyster shellbank hundreds of loads have been hauled out; but slight, if any benefit where spread; but some to the bank, as it is more easily worked.

Ashes.—From coal and wood, I have and shall continue to use, though it is really a poor manure, and decidedly injurious when plentifully spread. Oak leaves, and the scrapings of the woods, but of little value.

Salt.—I have found injurious in my few trials.

Hog Hair.—In corn hills, not a word in favor of; hog manure around tobacco plants, not worth applying; in the potatoe hill, giving a vine half an inch thick, over five feet high, and a half bushel of potatoes—no, not a tuber or a sign of a potatoe, save the outlines of those planted.

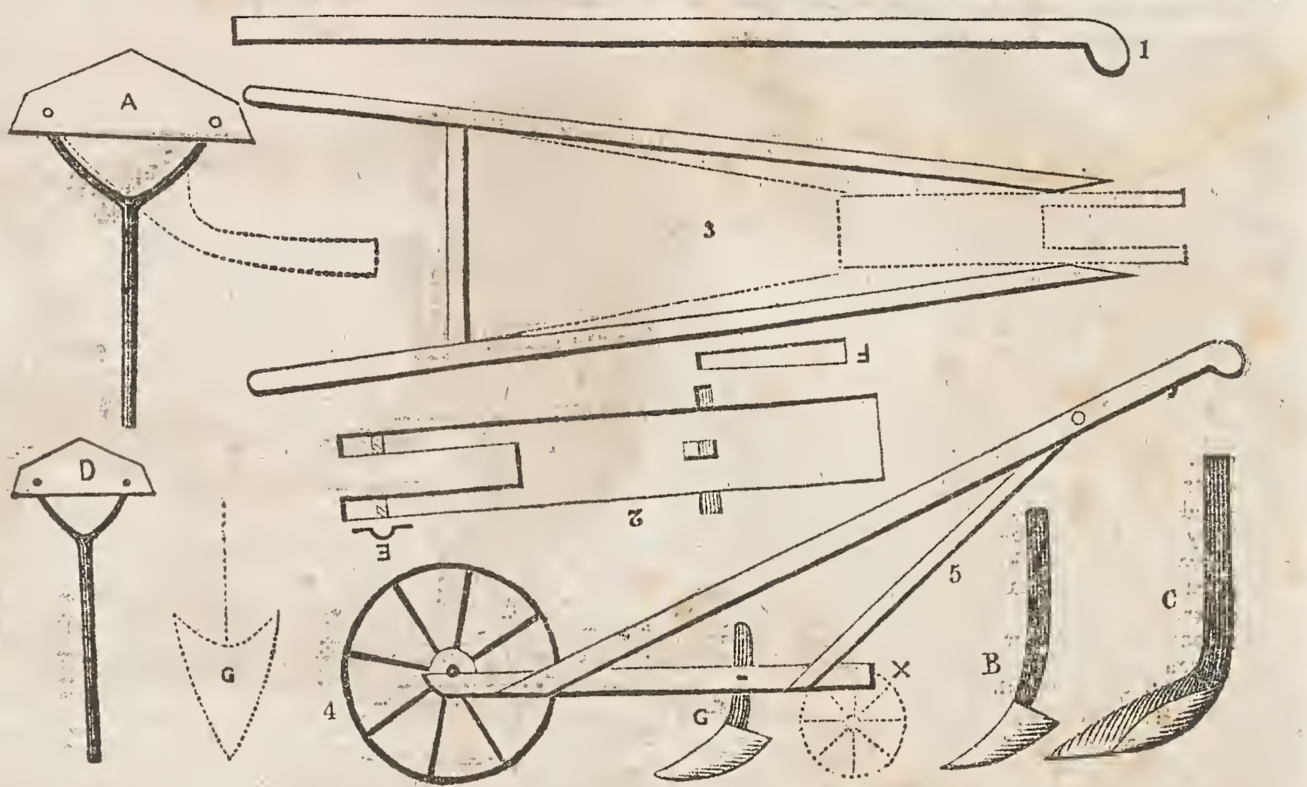
Chicken Coops.—The manure from, the farmer's best droppings; but like hen's teeth, it is a scarce article. When applied in the potatoe hill, it produced a delicate vine a foot high, and gave from fifty to sixty potatoes to the hill.

If I have failed in discerning virtue in the manures before stated, I have not experimented in vain, inasmuch as I have applied an article (of little estimation with farmers hereabouts,) upon my tobacco lots, (whether the cause or medium, be it with the chemist—all the same to the practical man,) whose verifying stimulating effects were astonishingly visible several hundred yards distant, and this article is neither more nor less than chaff. I have found it great plowed in for tobacco; good for corn when put in the hills; and the best crop and the finest potatoes I ever raised, were a shovel of chaff to the hill, when both corn and potatoes were planted in the same hill; the chaff was hauled from a neigbor's yard; he loaning me his cart to move it out of his way, in addition to giving it to me. Would you not take this as a proof that I have a kind neighbor, when I tell you his farm was *hungry* enough at the same time. Our lands have advanced in price and value over a hundred per cent in the last twenty years, and the action of plaster upon and with clover, receives unlimited praise for it; but my humble opinion, formed upon experience and observation, is that the greatest improvements are consequent upon the fairest and fullest growth of clover before grazing, (and that not done too meanly,) so as to shade and mellow and return much to lighten the soil; but all the close grazing and budding, with as much plaster as you will, will not improve my stiff soil. If to the above plan of vegetable manuring, you establish in your barnyard a regular place to deposit all vegetable articles proper for decomposition, and let your stock be the *directors*, or workers, (and it will be found your interest,) and the value of the *bank* will be in proportion to their *deposits*.

D. G. Weems.

Tracey's Landing, Md., May 10, 1843.

Soak your ruta baga seed in tanner's oil.—*N. E. Far.*



GARDEN PLOW.—(Fig. 54.)

Explanation of the Figures.

1. Handle, 4 feet 2 inches long.
2. Beam, 2 feet 2 inches long; breadth, 4 inches.
3. The two handles of the plow with the traverse; the handles 1 foot apart.
4. The iron hoop of the wheel, 1 foot in diameter, 1 inch broad, half an inch thick; the rest in wood.
5. One piece of wood, 2 feet long, 1 inch broad, and half an inch thick.

A, A Coulter, 11 inches long, 3 inches broad to the middle point.

B. Coulter, 4 inches. C. do. of 6 inches; the proportion is not kept in the figure, being made to indicate the elevated part that runs along the plants in the rows, and thus turns the soil from them.

D. A Coulter of 7 inches in its greatest length; 2 inches broad to the point.

E. An Iron screwed above the pivot of the wheel.

F. A wedge as represented in No. 2, fastening each coulter.

10 inches distance of the mortice from X.

Messrs. Gaylord & Tucker—I have thought that the plan of a small garden plow which I have been using these 25 years past, might be acceptable and useful to those who make a large market garden. The ground being plowed and harrowed, the beds made, the line stretched, the iron B. is put in the garden plow, which is then pushed along the line; if for peas, the rows may be eight inches apart, until there are three rows in each bed, all made by the plow and line. I have found that the peas planted in that manner were more easy to stick, and wanted less sticks to do it. The distance is large enough to cut the weeds with the little plow and the iron marked D., until the peas are large enough to be plowed with G., annexed to the plow in the subjoined plan. All vegetables planted or sowed in rows, may be thus plowed and tended. The iron C. is for little onions, carrots, parsneps, garden oysters or salsify, beets, &c. This iron goes very near the plant, and throws off the soil from it when needed. All those irons are made of old "hand-saw blades," and must be kept as sharp as possible. The iron A. is to be used to clean walks; then two small wheels must be adapted as pointed in the plan; they keep the plow steady. This iron must have a curve that may keep the heel about two inches from the ground, while the point enters it deep enough to take up the roots of the weeds.* Experience can best teach best means of using the instrument. All the pieces of the plow should be screwed so as to take it apart, if needed, to transport it elsewhere, or to replace what might break.

Yours, &c. W. Mentelle.

Lexington, Ky., May 15, 1843.

AN ESSAY

ON THE MANAGEMENT OF

DAIRY COWS AND CHEESE DAIRIES.

BY ALONZO L. FISH OF HERKIMER CO., N. Y.

The good success of a Cheese dairy through the year, depends much upon the treatment of cows during the fall and winter preceding the milking season, and on the kind and quality of food given them. I shall therefore commence my observations about the middle of October, relative to the proper articles of food, and the best manner of producing them, according to my practice and experience.

Cows that have been well kept through the summer, are now in good flesh, and should not be allowed to shrink from their present condition. If they are milked late in the fall, and left out to consume old dry corn stubble and frozen grass, (which is too common a practice to save fodder,) and to add to this mode of treatment, the poorest fodder is first fed, as if the cows could then live best upon *nothing*—such course of treatment, will reduce the flesh of any good milch cow, and leave the blood in a weak unhealthy state, and make the animal predisposed to horn distemper, hoof-ail, blain, and many other disorders which originate in the blood, and are incidental to cows after gestation; and require much strong feed to recruit them sufficiently to commence their milk, when they should require the *least*.

If cows are milked after grass becomes frozen and loses its nutrition, they should be sheltered from the cold storms and bleak winds, and fed plenty of good hay or its equivalent. A profit may also be derived from feeding apples, pumpkins, roots, &c. with discretion, on the decline of grass; as they increase the flesh and improve the milk. If the dairyman has not a supply of those to feed, he may substitute ground oats, corn, barley, buckwheat, or wheat bran, which should always be made into a thin slop feed, and scalded or soured several days before it is fed. From two to four quarts of provender meal thus prepared, is sufficient per day for each cow.

With sufficient feed and care, the milking season may be safely and profitably protracted until 90 days previous to the close of gestation. The cows should then be kept to dry feed and plenty of salt for ten days, which will have a tendency to dry up the milk by reducing the fluidity of the system; during which time they should be occasionally milked, as the condition of the bag may require. This may be a profitable time for *children* to milk, as they commonly dry up cows they are in the habit of milking. When regular milking seems to be no longer necessary, and the cows are nearly or quite dry, all the fluid should be thoroughly got out of the bag, that it may not be taken back into the system in an unnatural and unhealthy state, or remain to form callus, which frequently spoils a good cow. After cows become perfectly dry, they should be stabled in dry warm stables, and fed plenty of nourishing food sufficient to keep them in a healthy and thriving condition. A sheaf or two of oats, cut and well cured when the berry is soft, and fed daily to each cow at such a season, with plenty of good hay and an ounce of sulphur each, per week, for several weeks, will keep the bowels in a proper condition, and restore the blood to a healthy state, which is very necessary at this crisis.

Gestation produces the heaviest draft upon the system the last three months, during which time cows should be kept thriving if possible, without grain feed, as this is more conducive to muscle than fluid. The fluency of milk depends much upon the fluidity of the system being kept up through gestation; and I have never found this object accomplished easier or cheaper than by feeding plenty of good hay, with some roots, as the condition of the cow may require.

A healthy cow will thrive sufficiently upon good h[illegible] if well stabled and tended. If hay is not [illegible] mow, cows should be salted [illegible] in the [illegible] and often. In winter, the mildest weather should be chosen to salt them, and an opportunity given them to drink soon after being salted.

Milch cows should never be allowed to stand out, trembling in the winter's blast, as it will tend to contract the muscles and reduce the fluidity of the system.

Stables with stanchions are the most convenient, and are equally safe and easy for the cows if properly constructed. The greatest objection to this mode of stabling cows, is the difficulty in raising, when in stanchion, but this may be obviated by placing the plate or top of the stanchion aslant from the sill and from the body of the cow, varying about 12 inches from a perpendicular standard of 5 to 5½ feet in length, which is a proper height for the plate or top piece, thus accommodating the forward motion of the animal as she raises upon the floor, without pressing the shoulders.

Cows should not be out in severe weather longer than necessary to get drink, and if their hair gets filled with snow and frost, it should be brushed out, and every expedient should be used to promote the comfort and quiet of the animal, as it will save feed and increase flesh.

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* The small wheels are not wanted except for the iron A.

Raw potatoes, fed in small quantities with plenty of salt, during the last two weeks of gestation, is a safe and in my opinion the best feed that can be given to produce a sure secretion, and should be continued until the cow comes to her milk freely; one peck per day is a sufficient quantity for each cow. The strength of this feed may be safely increased with two quarts of provender meal, scalded or soured, and made into a thin slop.

Violent exertion, such as fighting, running, &c. should be prevented if possible at all times. If the excrement does not follow the calf within 12 hours, it should be carefully removed by hand, which will be less injurious than medicines sufficiently powerful to produce the desired effect. Cows should not be allowed to eat their excrement, but kept supplied with plenty of water, warmed to a temperate degree, and care should be taken to keep them perfectly dry and warm until they come freely to their milk; then the strength of their feed may be safely increased. But a proper medium and strict regularity should always be observed in feeding, in view of profit and the danger of over acting the system.

Some cows, being less fluent than others, will not bear as much feed; 4 quarts of provender meal per day, made into slop, as above directed, or one half bushel of roots, is strong feed, and as much as will pay a profit.

Cows should be carded every day, from about the 1st of March, until they are turned to grass, which tends to keep up a healthy circulation in the extremities and is a good substitute for exercise.

April is the best month for dairy cows to come in, after which period they should be kept fluent, if possible, till they can get plenty of grass. It is bad for cows to get reduced in vigor and flesh in the commencement of the milk season, as it will require much food in the best part of the season to recruit them to a healthy fluent condition. I would as soon start with my family upon a journey, in a poor worn out vehicle, which I knew would require me to lay by upon expense, to get it repaired, as to attempt to make a profit from cows poorly wintered. It may be relied upon as an unexceptionable rule, that cows will not yield their abundance in quality or quantity, unless they have been well wintered, so as to commence the milk season in a vigorous and fluent condition.

Strict attention should be paid to milking clean at this period, that the course of the milk may be thoroughly established in the system in the commencement of the season. Children should not be allowed to milk until they are strong enough to milk quick and thorough. Many cows require a thorough exercise of the bag to get the milk clean.

If a cow does not come to her milk fluently, she should be fed a common musket charge of gunpowder, or an ounce of floured sulphur, every other day for six days, which will increase the action of the fluids, and secure an increased flow of milk. During this process, the cow should not be fed largely with strong feed; her feed may be moderately increased with the fluency of her milk. I protest strongly against the practice of feeding dry, unscalded or unfermented grain feed to milch cows at any time, (except as a medicine in some cases, which I will notice hereafter,) as it must necessarily absorb much of the gastric juices of the stomach, instead of adding to them in the process of digestion.

Cows are many times troubled with cracked teats in the spring, which makes troublesome milking. This may be remedied by a few applications of the oil of pumpkin seed. If this cannot be procured, use the lard tried from bacon rinds, or the outside of bacon trimmed off, which is most strongly impregnated with smoke. The application should be made previous to milking, which will soften the teat and prevent further cracking, and work the oil into the wounds unhealed: these are the best specifics I ever tried.

As this is the season in which dairymen procure most of their rennets for summer uses, I would earnestly caution them against bad rennets. A good coagulator is an indispensable prerequisite in the manufacturing of cheese, and much depends upon its being properly saved. When the rennet of a calf is to be saved, it should have plenty of new milk, and be kept from taking any unclean substance into its stomach, which would make it necessary to rinse the coats of the rennet and destroy its vital strength. The calf should not be killed with a full stomach, as the gastric juices are then employed in digesting and discharging its burthen, and are not found in full strength in the coats of the stomach. Nor should they be kept a long time without milk previous to being killed, for in this case the system would continue its draft upon the juices of the stomach until its digestive powers became exhausted, and thus render the rennet unfit for use.

This is proven by the well known fact that animals can bear but a small quantity of food without injury, after a protracted abstinence. This is apt to be the case with rennets saved by butchers, as they are in the habit of keeping veal calves several days without food, to accommodate a market. The rennets, after being thus spoiled, are thrown into a brine prepared to receive them for *the season*, as the best facility to obtain the dairyman's nimble shilling for a rennet. I have known the whole strength of two rennets thus preserved, used in a cheese of 100 lbs., without digesting the milk sufficiently, besides making the cheese very rancid. I am not in favor of putting rennets in brine or pickle to preserve them, as it is difficult to make a composition that will control the acids of the stomach, or prevent a partial fermentation of its gaseous properties. The only sure method of preserving those properties in their full strength and purity, is by drying them in pure air. Calves should not be killed for their rennets, until they are four or five days old, during which time they should have plenty of new milk to acquire a healthy and strong digestion. Twelve or fifteen hours are required for a common feeding of milk to digest and pass out of the stomach, at which time the gaseous secretions are strongest and most abundant. The rennet should then be taken cleanly from the chest and carefully emptied of its contents, *without scraping or rinsing*, as that would destroy the mucus coats of the stomach. It should then be stretched upon a crooked stick or bow, and left open at each end to let the air pass through and quicken its drying. Then apply what fine salt will adhere to it on all sides, and suspend it in a dry airy place, to remain until wanted for use. Rennets thus prepared will be of good flavor, and sufficient strength to digest 600 gallons of milk if prudently used.

Many dairymen save and use the curd in a calve's rennet, as a matter of economy. It may be a general practice, but it is nevertheless a wrong one. It may be argued that milk when taken from the stomach of the calf, partially digested, contains much of the digestive properties of the stomach. I admit it does; but it is in a state of decay, and contains other properties which render it unfit for a wholesome digester, and if used separately will make a hard rancid cheese. Decayed apples will make cider, but the quality will be inferior to that made from ripe sound fruit, and there is a like difference in the quality of cheese made from the curd and that made with the pure rennet.

Cows should not be allowed to range the fields in the spring, until there is sufficient grass for them to get their fill. First, because it has a tendency to take their appetite from hay, and creates an uneasiness which will make them discontented with their necessary confinement during the summer. Secondly, nature has prepared the soil by freezing, which leaves it light and gives the new succession of roots an opportunity to spread and give birth to new and more numerous blades; and the soil should not be trodden down until this process is well advanced, when the sod will become so firm as to prevent the soil from being packed by the travel of the cows. I think this rule will admit of general application, as there are few soils in the dairying districts that are improved by packing.

Thirdly, early grazing is injurious to pastures, because it weakens the vital principle of the plant. It is a fact well established and easily demonstrated, that the root of a plant cannot flourish nor long exist without the top to assist in procuring its necessary food; the vigor and growth of the root will be in proportion to that of the top. On plowing a pasture that has been closely grazed for several seasons, a weak slender sward will be found, and but little necessity for a coulter. When the sward is kept thus light, the soil is but little benefited by transmutation. The principle has long been established that the growth of plants is produced in a great degree by absorbtion of their food from air and water, the top of the plant being the necessary vehicle through which it is obtained and a portion of it conveyed to the root, thus mutually contributing to each other's support. Water is found to be the chief food of plants, as it contains the gases necessary to vegetable life, and a portion of earth bearing a strong affinity to the main bulk of vegetable matter, this is most congenial in the dew which becomes strongly impregnated with gases in its descent from the air.

Admitting this theory to be correct, (and I am unwilling to believe any reflecting farmer will doubt its truth,) it behooves the grazier to keep his pastures from being trodden in spring, and preserve the first growth of grass to strengthen and invigorate the roots. A good fleece of grass not only benefits the roots by absorbtion, but retains the frequent showers and nourishing dews from speedy evaporation until the earth is well supplied with its genial qualities, and vegetation can drink its fill and have the benefit of the sun's heat in digesting its properties.

The grazier should not feel that he is losing ground, if winter overtakes him with a heavy coat of fall feed upon his fields, unconsumed, for it is money put to good interest, and sure to be paid the coming season. It not only shields the roots from frost and cold drying winds, but seems destined by nature for the propagation and nourishment of its successor; as all young plants are found to come forward earlier and grow more rapidly when nourished by their decayed predecessor; hence this rule will apply strongly against the practice of grazing meadows fall and spring, which is common among our dairymen, as a matter of convenience with some, and necessity (from heavy over stock,) with others; but neither convenience or necessity, (particularly when occasioned by over stock,) are a sufficient excuse for continuing the practice, for I am satisfied the grazier had better dispose of a part of his stock for what it will fetch, even at the lowest extreme of the market, than to thus over tax his soil.

When the proper period arrives for turning to grass, cows should have plenty of salt, and should not be allowed to graze but a few hours at a time until they get accustomed to the change of feed. They should have all the hay they will eat until the grass acquires sufficient heart to sustain them without "scouring." Should they have a tendency to scour, a few quarts of wheat bran may be fed with good effect.

A greater quantity of feed may be obtained from a given territory, by dividing it into separate lots, but I think cows will do better to have free access to the whole; as a few times shifting them to different lots of better feed, will create an uneasiness, until at length they will become dissatisfied with the best shift that can be made for them. The more quiet cows can be kept, the better they will do. Another objection to a shift of pasture, is, that cows are apt to over eat when turned to fresh feed, which is very hurtful. Cows are frequently attacked in the early part of the grazing season with a high fever, attended with trembling and a general agitation of the system, shrinkage of milk, dryness of the nose and cold extremities. This more frequently happens after long rains, when they have taken a great proportion of water with flashy grass. When a cow is thus attacked, she should be fed with two ounces of the flour of sulphur, or two common musket charges of gunpowder, in some kind of mash or slop feed, which will generally effect a cure. If the case is severe, a half gallon of blood may be taken from the neck, and the bag should be frequently washed in cold water to prevent the fever from settling there. There is but little danger of an attack of this kind, if cows are fed with plenty of salt, and one ounce of sulphur per week, which also adds to the fluency of the milk, and makes the cows more sure to get in calf in good season.

The farmer should destroy all bushes and trees in his fields. I am in favor of furnishing a proper shade for cows in the heat of the day, but opposed to shade trees, because they prevent an equal distribution of manure; the soil about the trees will become very rich, and the trees being *stationary*, no benefit can be derived by tilling within their influence. Nor is this the only objection; forest trees have a strong attraction for the vegetable elements with which the atmosphere and dews are strongly impregnated; hence their affinity for these properties will secure them to their own use, before the weaker class of vegetables below can reach them. It is for this reason, that grass grown in bushy pastures and orchards, is not so sweet as that which grows in the open field, robbed as it is of its vitality by a higher and stronger class of vegetables. I therefore prefer artificial shades when necessary, which may be cheaply constructed with crotches and poles, covered loosely with old boards, slabs or brush, which will answer a good purpose, and may be moved annually, to enrich those parts that need a partial treatment. Then if occasion require the ground to be tilled, there will be an equal distribution of manure, and no roots to impede the progress of tillage, nor forest trees to absorb and drink up the proper food of the cultivated plants. Two men with a team will build shade sufficient for 40 cows, in a day. Cow's horns should be made blunt, by sawing off the ends, or putting on buttons, to prevent their wounding each other.

There is a great risk in old cows coming in after accumulating flesh on grass; feeding plenty of salt and taking several small bleedings previous to calving, will generally prevent an attack of fever.

(*To be Continued*)

BREAKING HEIFERS, MILKING, &c.

EDITORS OF THE CULTIVATOR—One who has perused your paper with interest, who has found therein something to amuse, more to instruct, and still more to promote thought and inquiry, is willing to contribute occasionally to its pages, some portions of his own limited experience, if it is worth the room it may occupy.

First, with regard to breaking heifers to the pail. Many are spoiled by bad management; as a heifer may be a fine animal, and a deep milker, but yet of little value to the dairy, if inclined to kick over the pail as soon as you get it full. There are cases where nothing more is necessary than to turn them in a pen ten feet square, and after gently handling, proceed at once to milk them. But I am convinced from considerable practice, that the best way and most expeditious in the end, is to tie up the animal with a noose over the horns, to a suitable place about as high as its head, with not more that one foot of spare rope; as there is much less danger from flouncing with a short rope. In a few minutes the animal will display signs of violent anger, followed probably by a second or third fit; when these have subsided, she may be milked carefully, and an experienced milker need fear no kicks; after the first or second milking there will be no difficulty; she quickly becomes accustomed to the rope, which may be continued a week or more if necessary. She will show a preference for that place awhile, but soon will be glad to be milked any where. Do not feed her while milking, or else she will refuse to be milked without her feed very commonly.

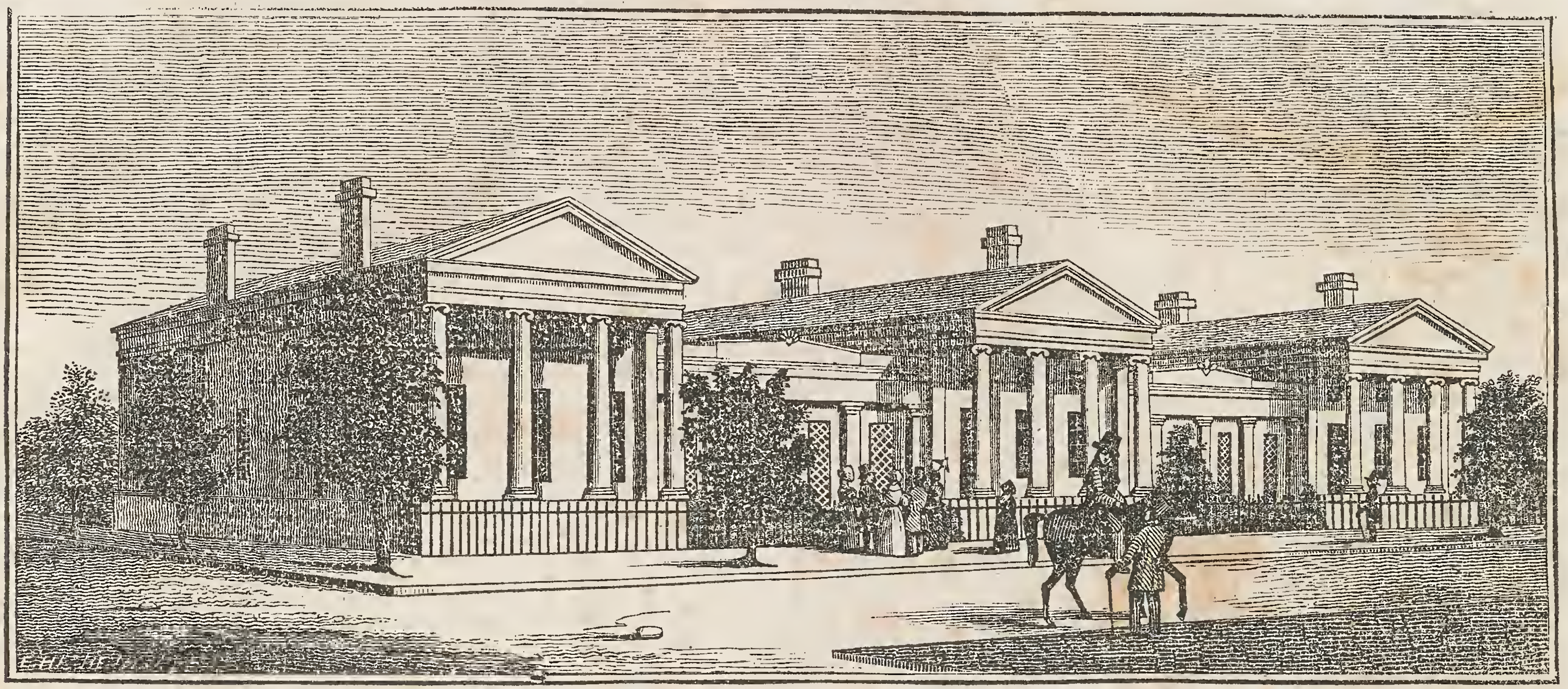
Sore teats should be attended to in season. White lead and linseed oil, made in a thick paint, is the best application that I know of.

One word as to milking, especially heifers or cows inclined to kick. Use no stool, sit close up with the left side and arm inclined towards the cow, which makes the work easier, and gives less room for a blow; and let the left knee project in such a way as to protect the pail, which, if needs be, may be kept pretty well back. In such arrangement there is little danger, and often a saving of much vexation. Gentle treatment is much the best.

Farmers lose much annually from not using *their eyes* in the cow yard, or having some one there directly interested. Hired men and boys can seldom be trusted entirely with the cows. What I have said of milking, will not apply to women; they are sometimes excellent milkers, but it is not so easy for them to protect the pail.

A FARMER'S BOY.

Quaker Hill, N. Y., 1843.



COTTAGE ROW, TROY, NEW-YORK.—(Fig. 54.)

As the Editors of the Cultivator seem anxious to "improve" every thing for the gratification, comfort and convenience of man, it affords me pleasure to be enabled to furnish the above drawing by Hathaway, of Cottage Row, situate in the southern part of the city of Troy, on the corner of Second and Liberty streets.

The principal front is on Second street, occupying a space of one hundred and twenty-five feet, and consists of three cottages occupying the corner, center, and south lots; the two remaining lots are appropriated to tastefully arranged flower beds, grass plats, shrubbery, etc. The flower beds are fronted with a high fence or screen, finished in a style of architecture corresponding with the cottage fronts; it has openings similar to windows, which are filled with lattice work, which admit a partial and pleasing view of the ornamented grounds from the street; there is also through this screen a gate of entrance to the grounds. The cottages are finished in front with porticoes of the Grecian Ionic order, of four columns, supporting an entablature and pediment. The front is placed back from the line of the street about eight feet, leaving an enclosure for shrubbery. The principal floor is raised about three feet above the level of the street, admitting cellars, &c. The front on Liberty st., is composed of the flank of the corner building, with the entablature of the portico continued across it; at the east end of this front, is an inverted portico, leading to a room suitable for an office, which however is connected with the other parts of the house.

The entire is finished in a neat and substantial manner, containing on the principal floor, the entrance hall, two parlors connected by sliding doors, a breakfast room, bedrooms, and several other smaller rooms; the second story, which is partly in the roof, is occupied for sleeping rooms. The buildings are small; but the three taken in connection with the screens, as a whole, present a chaste and pleasing appearance.

This pretty spot was designed, built, and is now owned by that enterprising citizen, Norton Sage.

Alexander Walsh.

Lansingburgh, N. Y., June 12, 1843.

NEAPOLITAN HOGS.

Messrs. Gaylord & Tucker—From the repeated inquiries made to me, regarding my opinion of this breed of swine, I presume a description and some account of their origin, may not be uninteresting to the readers of the Cultivator.

The first Neapolitan pigs introduced into this section, were imported in 1838, by Henry Holland, Esq. of Ballston. In the summer of 1839, Mr. H. presented the writer with a pair from the first litter. In color they were similar to the Elephant, a sort of lead or slate color, with a belt or sheet of white covering their shoulders and part of their body; with little or no hair on them, resembling in that respect, the African dog, the Elephant, and the Rhinoceros, which at first sight gives them rather an unprepossessing appearance; and I never knew but one person that first looked on them, but turned away from them, exclaiming, "Well, I don't like them."

In many points they much resemble the Berkshire pigs; the head is small, ears upright, small, and handsomely formed; bodies long, round and straight on the back; hams large and full, like the Berkshire; tail long, small, and without the *kink*, so common in the Berkshire breed. They have a keen, black, piercing eye, and a peculiar knowing look or wise countenance. In size they will rank below medium, as from my experience, I much doubt whether they can be made to exceed, at maturity, over 300 lbs.; from 200 to 250 lbs. would probably be a fair estimate, at from 18 to 24 months old; but then, like improved Chinese, they are easy and quick feeders, and are valuable for crossing with the larger and slower growing sorts.

About the same period, or soon after Mr. H. imported his Neapolitans, James G. King, Esq., when in Europe, purchased a pair, for which he paid the liberal price of $160, and sent them home to his beautiful residence at Hoboken, for the purpose of introducing this valuable breed of swine in his native country. After breeding them for several years, with a commendable and praiseworthy liberality, he distributed many of them among his friends, (and among whom the writer was fortunately classed,) and in the fall of 1841, he presented to the N. Y. State Agricultural Society ten head, including the imported ones, to be exhibited at the Fair at Syracuse, and to be sold at auction, and the avails added to the funds of the Society. At the time appointed for the sale, a storm set in, which so *dampened* the ardor for improvement, that no bids could be obtained, and they were distributed among some of the members, who were to report at the meeting of the Society in 1842. I regret to say no reports were made, and the only mention made of them was by our worthy Corresponding Secretary, H. S. Randall, Esq., who in his report of the agriculture of Cortland co., published in Transactions of 1842, says:—"I regret to state that the fine imported Neapolitan sow, presented to the State Ag. Society, by James G. King. Esq., and which by a vote of the board was placed in my hands to test the comparative value of the breed, perished before reaching my residence, in consequence, probably from injuries received on ship board."

The two presented to the writer by Mr. King, although now two years old, the sow has never bred, nor is there any prospect at present of obtaining pigs from her. Notwithstanding she is scrimped in her food, still she keeps in high condition. It seems quite an effort for her to get up and eat her meals. She is certainly the laziest animal I ever saw. Why, she is too lazy to squeal or even grunt. Not so with the boar, for he is wide awake, and would match in a race, the leaper, described by Lansingburgh, page 52, vol. V, of the Cultivator.

I have crossed the Neapolitan with the Berkshire and improved Chinese, fattened, slaughtered and eat them, and must confess I found the pork *superior* to any other I ever tasted.

C. N. Bement.

Three Hills Farm, June 20, 1843.

MICHIGAN SOIL, FARMING, &c.

Editors of the Cultivator—There is perhaps no wooded country to be found, that can be more easily reclaimed than the oak openings of Michigan. The usual custom of the first settlers of these lands is to girdle, plow and sow, the first year; and unpromising as it may appear, I am told the first and second crops are generally reckoned among the best. The soil is of a sandy nature, generally level, and easily broke up and cultivated. But the course pursued in the management of land is essentially an exhausting one, and should it be continued, it is easy to see that at no very distant day these fertile plains will be hardly worth possessing. Perhaps I came here expecting too much—expecting to see the agriculturist convinced (perhaps by experience at the east,) of the bad policy of the exhausting system, and endeavoring by all the means in his power to collect materials to keep up the fertility of the soil; but such is not the case, and perhaps will not be, until the inhabitants shall feel themselves more permanently settled. This is truly and emphatically a moving people, and mid-summer as well as mid-winter, forms no obstacle to "selling out;" a few days only are necessary to find the seller established and "staying" in another place. While such a state of things exist, and the owner or occupant of a farm feels that the present crop may be the last he will gather, it is probable the skinning system will not be abandoned. While deploring these things. I have often thought of a remark made by my father, whose opinions I have always found entitled to respect, that in emigrating you should inform yourself by reading or otherwise, of the most fertile districts in the country to which you intend emigrating, and then visit beforehand personally, and if possible accompanied with your family, that section; then make your choice, and from thenceforth, extraordinarys excepted,) to consider it your permanent home. Can a farmer reap the benefits of a scientific and well digested system of agriculture and be a mover?

And now while upon the subject, allow me to make a few remarks about emigrating to a new country. Whoever comes here expecting to realise one-half of the pleasure and "far delights" that a fertile imagination will conjure up when seated in the comfortable apartments of a farmer's cottage, with perhaps a smoking breakfast, dinner or tea before him, will be disappointed. One moment's *cool reflection*, or at least a few month's trial, will satisfy the most skeptical, for in the nature of things it cannot be. It must, and it will take years, before the beginner will have those thousand little comforts and conveniences—aye and great ones too—about him, that he has left behind. There may be romance enough in the idea that you have emigrated, to sustain you a few times in going twenty miles to mill with an ox team, or a quarter of a mile after water, yet it is thought that when "tired nature" shall lisp these significant words, "uncomfortable," and "inconvenient," it will effectually banish the bright dreams of the imagination. Above all things does old age and pioneering seem incompatible. Reflect and hesitate long before you tear up those old deep rooted affections to transplant in another and a newer soil. They cannot flourish again, and perchance may die. Young trees may bear the transplanting, but the old deep rooted and established should not be moved.

Respectfully yours,

Waterford, Oakland Co., Mich., 1843. G. Cook.

500 REASONS WHY LAND SHOULD BE IMPROVED.

More can be cultivated with the same hands, because tilled with less hard labor.

Briers and shrubs disappear, and grasses appear.

Cattle damage the land and grass less, because they do not have to tramp so great a space to fill themselves.

Less land required; less fencing.
Less trotting after cows and horses.
Less work at the smith's shop.
Fewer whips worn out.
Stronger teams.
More manure, and less need for it.
A stimulus to action.
A protection against winter's frost and summer's heat.
A good example to children and neighbors.
Keeps off sherifs and buzzards.
Stops emigration.
Produces money for books, and time for reading.
Surplus time and money for erecting buildings.
Also school houses and churches.

Produces time to travel, to lecture on economy and preach the gospel.

Produces sociability and hospitality.

Makes a paradise of a barren, plenty out of poverty, a blessing out of a curse.

The barn is filled, the dairy is filled, the purse is filled, and the soul is filled with gratitude.

If the reader will reflect, he will discover that the number of good reasons why the farmer should improve his land, is almost innumerable.

D.

Amherst, Va., June 18, 1843.

HIRING HELP.

Messrs. Editors—How common is the saying among a class of our farmers, "Oh, I can't afford to hire." The truth of the remark we are frequently, though reluctantly forced to admit. This class you will generally find to be an honest, well meaning, hard working set of men, who deserve a better reward for their toils than they get; notwithstanding they are the very ones, I dare assert, who annually scrape over double the number of acres they ought, of land already exhausted by the unskillful husbandry of their fathers, and perhaps grandfathers before them. (This tenacity to old habits, which have no other recommendation but their antiquity, has been, and is yet a serious hindrance to the improvement of our agriculture.) Their broken down fences afford poor protection to the scanty crops which they have extorted from the earth. Their ill fed cattle, exposed to the peltings of winter storms, are suffered to roam at large about the farm or highway in search of food and shelter, leaving their manure, of so much value to the farmer, exposed to bleaching winds and rains, or where it cannot be available by them. This is indeed a lamentable state of things, but no more deplorable than true; and you will generally find the other arrangements of the farm corresponding. But to our text. We do not pretend to say hiring help would better their condition or remedy existing evils, for they most assuredly cannot afford to hire help under this state of things. It would be preposterous to hire men to do hat which will not half pay. The success of employing extra labor does not depend so much upon the amount of labor employed, as upon the proper application of that labor. Labor is capital; capital is money. Thus money, capital and labor, are the same; and it is evident the more money is profitably invested in any business, the greater the income to the capitalist. This fact being established, proves the ground we have taken tenable; namely, that farmers can afford to hire help. Look at the iron manufacturer, or the proprietors of any of the manufacturing establishments in our country; with the labor of his own hands alone, he can barely obtain support for himself and family. His prosperity mainly depends upon properly directing the operations, not only of his own hands, but of others.

Now the question arises how shall the farmer make a proper investment of such capital. Recent surveys, and more particularly agricultural periodicals, throw much light on this point. Read and adopt, for the skinning, the system of manures and rotation. Husband your manure as carefully as your money; make your hogs work; turn all refuse straw and vegetable rubbish to some account, and you will not fail of success. In conclusion, let me say, that if you conduct your farming operations in such a manner that you cannot afford to hire help to put every acre under good cultivation, you cannot afford to work yourself; you had better sell your acres and "hire out," for if wages are too much to hire, the "day laborer" has an advantage over you; choose his occupation at once. *Bridgeport, Conn.*, 1843. H. S.

SEEDING GRASS LANDS, &c.

Messrs. Editors—In a former communication to you, I stated my opinion that the raising of wheat by us Long Islanders, was only incurring a large expense in the outset which could never be repaid by the crop itself; therefore, last year, in spite of the remonstrances and ridicule of my brother farmers, I determined on laying down a field to Timothy alone; and believing that it was the wheat and not the grass that was the great exhauster of the soil, I argued that it was useless to put the same quantity of manure on the lot that is found to be necessary for wheat. I therefore put only about two-thirds the amount to the acre, and sowed it thickly in the month of October; and at the present time, (taking into consideration that my seed should have been put in two months earlier, and that we have had extremely dry weather for nearly a month,) my grass is looking finely, and I have every prospect of a good, though a late yield of hay, the present year; and I think the fact of one-third of the manure being saved by this process, and of being enabled to cut a crop of hay the first season nearly or quite equal in value to a common crop of wheat, should cause the experiment to be fully tried.

The year before last our fields were covered with that pest "Johnswort," and I went to the trouble in one instance, of cutting the weed down before the seed had ripened, raking them together, burning them, and then plowing the lot early in the fall; but it was labor thrown away; for the next season from some (to me,) unaccountable cause, the weed entirely disappeared from this section of country.

Apropos of seeding down to grass. How would it answer to manure as I propose above, in the spring, and seed it down with barley, timothy and clover? Would it cause the barley to lodge, and would the timothy be likely to do well planted at that season? In the vicinity of my house is a very steep hill-side, covered the last spring chiefly with dog-wood, which I had cut down and drawn down the hill by hand; thus having the same effect on the crumbly soil as a fine or bush harrow. This hill, without other preparation, I seeded with timothy, and this year it has the luxuriant appearance of a new meadow, bidding fair to yield good pasture, where before nought but weeds or coarse grass grew.*

Can you tell what manure is the best for me to apply to a poor sandy gravelly hill field, to enable it to produce good grass, and resist the effect of the summer sun? Loam I have in abundance, but the field is so sidling that some more portable amelioration of the soil is required.†

I speak from experience of its good effects as a manure, in recommending those having opportunities of obtaining sawdust, to fill up all holes in their pig pen and cow yard, and covering the bottoms of both with it, for it certainly makes a strong, portable and retentive manure. It will retain much of the more valuable parts of the manure that would otherwise be mostly lost.

I see in your paper, frequent mention of, and answers to inquirers, on the various kinds of straw cutters, but the great objection to them is that the price is too high to authorize owners of small farms to purchase them. Can you inform me of any whose size and price corresponds with the labor required of them, on small farms of from 30 to 60 acres?‡ A. W. L.

Hempstead Harbor, L. I., May 19, 1843.

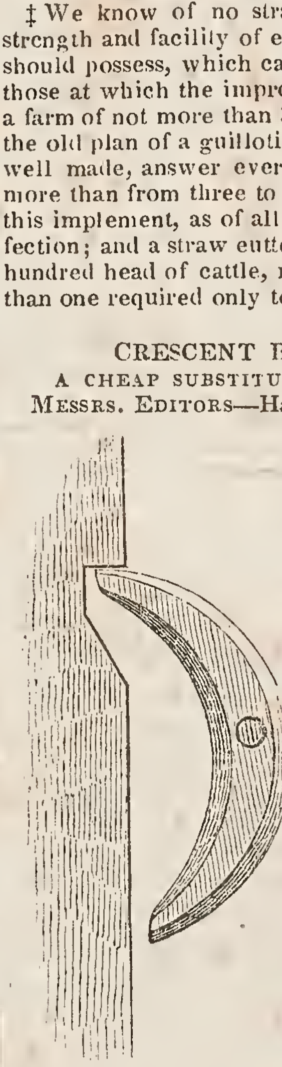
* We have long been in the habit of seeding lands to grass, in the manner respecting which our friend inquires, with the exception that we prefer spring wheat or oats, to barley, to sow with the seeds. The reason is, barley covers the ground more fully than the other grains, and as the young grass necessarily springs up and grows in the shade, if a hot sun and dry weather follows the cutting of the barley, it is frequently destructive to the grass. From this cause we have sometimes failed with grass seeds, when sown with barley, but rarely, if ever, with oats or spring wheat.

† It is evident no light portable manure, will correct the sandy light soil, of which our correspondent complains. It requires more firmness, and additional power of retaining moisture. This is best given by the addition of clay in some form, and a clay marl would be the best of all. Loam would be useful, but its effect, or its durability, much less than that of clay or marl.

‡ We know of no straw cutter which combines the strength and facility of execution which this implement should possess, which can be afforded at less prices than those at which the improved straw cutters are sold. On a farm of not more than 30 or 40 acres, a straw cutter on the old plan of a guillotine blade and lever, would, when well made, answer every purpose, and would not cost more than from three to five dollars. The expense of this implement, as of all others, must depend on its perfection; and a straw cutter calculated to make chaff for a hundred head of cattle, must be expected to cost more than one required only to do the work for a dozen head.

CRESCENT BUTTON.—(Fig. 55.)

A CHEAP SUBSTITUTE FOR WINDOW SPRINGS.



Messrs. Editors—Having adopted a very simple fastening for window sashes, I offer a description for your valuable paper, as it may benefit some of your readers, and save them the expense of spring fastenings. It is a button in the form of a crescent, about 2½ inches long, and attached to the sash on the left hand side, by a wood screw. It should turn easy on the screw, so that it may move by its own weight. When the sash is down, the upper end drops into a notch in the casing, and fastens it down. To raise the sash, place the thumb of the left hand on the lower end of the button, which will withdraw the other end from the notch, and allow the sash to be raised; and to fasten it up to any required distance, press the lower end into the notch in the casing made for that purpose, and allow the weight of the sash to bear on the button before withdrawing pressure. To let down the sash, merely raise it so as to remove the weight from the button, when it will leave the notch, and allow the sash to be let down with one hand. The button may be made of any kind of firm wood, or of brass. F.

Salubrity, S. C., 1843.

BEST SYSTEM OF FARMING.

Messrs. Editors—I wish to make some inquiries of you and of your numerous correspondents, and also to state some facts, for it is upon these only that we can rely for improvement in our agriculture.

I have noticed that the correspondents of your excellent paper have recommended to us inexperienced farmers to adopt a better system, and rotation of crops, but have unfortunately failed to inform us what that best system and course of rotation was; and that is precisely what we should most desire to know. If you, or any of them, would state what is the system and course of cropping best adapted to soils rich enough to produce wheat, corn, oats, and roots of all kinds, or what would be still better, the system necessary to make our poor soils rich enough for such a course of cropping, a real benefit would be conferred on the community.

It is often the case, in this section of country at least, that a young man comes of age and receives from his father 100 acres of land, more or less, and he settles upon it, thinking to make a support for himself and family. But he finds the land worn out, and the crop hardly paying for the labor. He is industrious, and collects and uses all the manure possible; but all are aware that where the land is poor, the manure piles are poor also, and he finds that he can till it out of the soil faster than he can return it to the soil. How is such a man to get a start up hill? He has to look to the farm for his living, paying off his hands, &c., and too often at the end of the year he finds himself in rather a tight fix, and experiences no little difficulty in making, as friend Robinson says, both ends meet. There are many of us who would be glad to start right, if we only knew or could be told how, and not be left to guess and surmise for ourselves. My soil is clay loam resting on red or yellow clay, and stable manure and ashes will bring good crops. Lime appears to be of little benefit, or I did not apply it right. I put it on in the fall, and turned it in the next year for corn. *Kent co., Del.*, 1843. J. G. Chambers.

We hope some of our correspondents acquainted with the best mode of treating such soils as that described by Mr. Chambers, will respond to his inquiry, and lay down not only the best mode of rotation on such soils, but the best course of restoring them to fertility when exhausted by improper treatment. We once heard a young man complaining to an old and experienced one, whose success in farming gave a value to his opinions, that he was unable to manure his land sufficiently to produce good crops. "Then manure less," was the reply of the veteran; "if you have only manure enough for five or ten acres, apply it to five or ten acres, and not spread it over twenty or fifty. A soil properly constituted, if once made rich, and then well treated, is made rich forever. My farm was an exhausted one like yours, but I made it an invariable rule to cultivate no more than I could place in the best possible condition as I went along. If it was only five acres, well; if twenty acres, so much the better. Remember when your land is once rich, under a good rotation of crops, but little manuring will be required to keep it so, or indeed constantly improving." This, at the time, we thought sound doctrine, and many years observation has confirmed this opinion. Our friend, if he has peat, muck, or even turf at his disposal, may treble his manures by composting his stable manures, ashes, &c. with such matters, in the manner adopted by the best farmers. We should think from the description of the soil, that lime, or rather a *sandy* marl, would operate favorably in its amelioration; but this is a manure from which immediate effects can rarely be expected.

The way for the young farmer to "start right," may be expressed in two words,—industry; economy. Industrious in labor, industrious in the employment of time, industrious in the accumulation of knowledge, the farmer and the mechanic must be, or he has no right to expect success. Living a life of industry, does not imply a life of servitude. To suppose this would be as unjust as to imagine that a life of action must of necessity be a life of misery. Industry implies health, usefulness, a capacity for happiness, and the power of attaining it. Economy is not less essential than industry to the man who would start right. It is not enough to earn money; the proper mode of disposing of it should be well considered. The great error of farmers, (and they are not alone in this matter,) is a proneness to run into debt. More men have been ruined in the United States, by having such good credits, than by any, or by all other causes. One half the articles that are now purchased on credit, would never be purchased at all, if the cash down was demanded. When men purchase on credit, they are apt to consult their imagination or inclination; when they purchase for cash, they consult utility and necessity; and this alone will reduce the length and amount of their bills amazingly. But the man who is anxious to start and progress right, will be extremely cautious how he adopts or practices any system, which under the name of economy, prompts him to cut off the fountains of intelligence, and dry up his sources of knowledge. He knows that improvement is the order of the day; that the age is one of progress; and that he who does not keep pace with the movement must be crushed. Such being the case, whatever may be his pursuit, he reads, reflects, compares, and would consider that as fatal parsimony, which cuts of the means of performing all these things understandingly.

EFFECT OF CHANGE OF CLIMATE ON CATTLE.

Messrs. Editors—I, as well as many of my neighbors, should be pleased to hear from you respecting the effect of change of climate on cattle, and the proper treatment required. For instance, we have the (English) Durhams, &c., brought from Kentucky, Ohio, &c., and it is a rare chance that we can get them to live through the first season. Wm. Clive.

Fort Adrms, Miss., 1843.

As the ox is found in all latitudes and climates, from the equator to the 60th degree of latitude, or even higher, we are unable to see why any variety of this animal should not succeed as well in Mississippi, as elsewhere. With the ox, more is depending on the food he receives, than on climate; and if our friends in the south will provide suitable pastures of clover and the other cultivated grasses, with roots, turneps, carrots, or beets, for use occasionally, or during the winter months, we think the Short Horns will succeed as well there as elswhere, or as well as any other variety of cattle. There is not more difference in the climate of Kentucky and Mississippi, than between that of the Scotch Higlands and Somersetshire in England, and yet annually, thousands of cattle are driven from the north to be fattened in the warmer climate of the south. Attention to the kind and supply of food, will doubtless obviate the necessity of recourse to any other mode of treatment to ins[illegible]e success.

THE WILD HORSE.—(Fig. 00.)

Veterinary Department.

MANAGEMENT OF THE HORSE.

Messrs. Gaylord & Tucker—The accompanying cut of a Wild Horse, gamboling in his native freedom, is a fancy sketch, from the "Spirit of Humanity," a compilation of numerous and weighty authorities in favor of the kind treatment of animals. It seems passing strange, while the treatises of the Encyclopedias, Agricultural Societies, and various talented and experienced individuals, strongly recommend the milder course for the benefit of the human race no less than the brute, that the lords of creation should so frequently and so grossly trespass and pervert their prerogative of dominion into tyranny. With the engraving, are two or three extracts from the "Stable Economy" of John Stewart, a very clever, practical and philosophical writer, and like his countryman John Lawrence, a friend of man and of horses. Their excellent essays would well bear republication in this country, in a cheap form. Being aware of the very extensive field from which the Cultivator is supplied, the selections offered below are quite limited.

J. R. A.

Docking.—In this country the horse's tail is regarded as a useless or troublesome appendage. It was given to ward off the attacks of blood-sucking flies. But men choose to remove it without being able to give the horse any other protection from the insects against which it was intended to operate. The tail may be very useful in some respects, and in the good old times it was permitted to flourish as it grew, being only bound when it troubled the horse's rider. But in times like these, when men clamor for freedom, and practice tyranny, it must be cut off.

It is said that the back becomes stronger after the tail is docked; that the back receives the blood which formerly went to the tail. There is no truth in this. The small quantity of blood which is saved can be furnished by one or two additional ounces of corn, and there is not the slightest proof that the back becomes stronger.

Some writers have contended that the tail of the horse, like that of the greyhound or the kangaroo, assists him in turning, in the same way that a helm guides a ship. Whether this be true or not, there can be no doubt about the utility of the tail in keeping off flies, which to some horses give extreme torment. I have heard or read of a troop of cavalry employed, I think, in some part of India, that was quite useless in consequence of the annoyance the docked horses received from a large species of fly. In this country, for two months of the year, thin-skinned horses suffer excessively, and many accidents happen from their struggles or their fears. At grass they are in a constant fever.

It is surely worth while inquiring, whether all that is gained by docking balances the loss. In comparing the two, it ought to be remembered that lock-jaw and death are not rare results of the operation.

Nicking.—In England and Scotland, this operation appears to be fast and justly getting into disrepute. It is still very common in all parts of Ireland. Its object is to make the horse carry his tail well elevated. Two or three deep incisions are made on the lower surface of the tail; the muscles by which it is depressed are divided, and a portion of them excised. The wounds are kept open for several days, and the tail is kept in elevation by means of pulleys and a weight. It is a surgical operation, but no respectable veterinarian would recommend it. It need not be described here. On the continent, a tail thus mutilated is termed *Queue à l'Anglaise,* in compliment, I suppose, to the English.

There is a safer and more humane method of attaining the same object. If the horse do not carry his tail to his rider's satisfaction, it may be put in the pulleys an hour or two every day for several successive weeks.

A cord is stretched across the stall, near or between the heel posts; the hair of the tail is plaited and attached to another cord, whieh passes upward, over a pulley in the transverse line, stretches backward, where it passes through another pulley and descends. To this a weight is secured, a bag containing sand or shot sufficient to keep the tail at the proper elevation. A double pulley on the cross cord permits the horse to move from side to side without twisting the tail. The weight should vary with the strength of the tail. From one to two pounds is sufficient to begin with. After a few days it may be gradually increased, so as to keep the tail a little more elevated than the horse is wonted to carry it. The time which he stands in the pulleys need not in the first week exceed one hour; on the seeond week he may stand thus for two or three hours every day, and at last he may be kept up all day, or all night, if the horse be at work during the day. Should the tail become hot or tender, or should the hair show any tendency to fall out, the elevating process must be omitted for a day or two, till the tail be well again, when it may be resumed and carried on every day, unless the hair again become loose, which is a sign that the weight is too great, or too long continued.

From this operation there is no danger of the horse dying of lock-jaw, nor of the tail being set awry, nor broken, as sometimes happens after nicking. It requires a much longer period to effect the elevation, but that is of no consequence, since the horse need not be a single day off work. When nicked he must be idle for several weeks.

Bedding.—To a hard working horse, a good bed is almost as essential as food. Many stablemen cannot make it. It should be as level and equal as a matrass. There should be no lumps in the litter; it should come well back, and slope from each side, and from the head towards the center. Farm servants and carters never give the horse a good bed, although their horses need it fully as much as any other. They generally have the litter all in a heap, or in a number of heaps, upon which the horse cannot lie comfortable for more than half an hour. The efforts such a bulky animal must make to rise and change his position, completely awakens him. His rest is broken, and his vigor never fairly recruited. Now, it is not difficult to make a good bed; any body with hands may learn it in a few days. But no one thinks of learning such a thing. Those who become expert at it cannot help their expertness. They never tried to obtain it; practice gave it to them before they knew it was of any use. But for all this it may be learned. Show the man how to use the fork, and how to spread the litter; give him a pattern bed in one stall, and make him work in the next two hours every day, for a week. If he cannot learn it in this time—the operation is really worth such trouble—the man will never learn any thing.

While the old litter is not in sufficient quantity to produce any sensible impurity of the air, it can only be called a slovenly, not a pernicious practice. But the stables of farmers and carters are in general too bad. Their horses never have a decent bed. There are no fixed times for changing the litter. When it becomes so wet and filthy that the keeper is somewhat ashamed to see it, he throws down some fresh straw to conceal that which ought to be taken away. That is done, perhaps, every day; but it is not till the horse is standing fetlock deep in a reeking dunghill, that the stall is cleaned to the bottom.

Upon such a bed the horse can never obtain unbroken rest; and the stable can never be comfortable. The noxious vapors arising from the rotting litter, are destructive to the eyes, the lungs, and to the general health or strength. When there is a circulation of air sufficient to carry off these vapors, the stable is cold. While the horse is lying, the cold air is blowing over him on the one side, and the dunghill is roasting him on the other.

This is an old practice, and of course not to be abandoned without a struggle. The farmer contends that it is the right way to make good manure, and the carter that it saves the consumption of straw. Manure may be made in this way, perhaps, well enough; but horses are surely not kept for that purpose. Visit the stables of those who have been successful farmers. See how they contrive to obtain manure. For the poor carter, who cannot afford to give his horse a comfortable bed, there is no remedy unless he can learn to live without quite so much whiskey.

COLIC IN THE HORSE.

Editors of the Cultivator—In your number for this month, I notice an article on "Colic in the Horse," and it gives me much pleasure to be able to concur with you most fully in regard to the severity and danger of the disease; and for the most part also in the treatment, which, so far as it goes, is in every respect unexceptionable; and I think it not improbable that when resorted to in proper season, will, as Mr. Stewart believes, succeed in eight cases out of nine.

The ninth horse however, ought to be saved if possible, and I as freely believe that this last object may be attained in *every true* case of colic, as that the first eight will be saved by the remedies proposed. I cannot agree with you that the first object in the treatment is to arrest the fermentation, or that this is a primary cause of colic, believing it to be only one of the consequences. However this may be, I would rather say that the first object is to allay the pain—to relieve that excruciating agony which is, I apprehend, the very first morbid change which takes place in colic, and which being suspended, all other morbid phenomena subside of course, unless disorganization of the intestines has already taken place. This object can always be attained by the proper use of opium—exhibited either alone or in combination with the stimulants advised by Mr. Stewart. These last, however, I should think might be essential when there are evident symptoms of exhaustion and prostration of strength.

In cases of much severity, two ounces of a saturated tincture of opium, (laudanum,) may be given every half hour, till the pain is relieved, and if the symptoms are peculiarly distressing, three ounces may be given once in 20 minutes.

If the belly is distended and very hard, a moderate bleeding may be conjoined with this treatment with advantage.

I have known 8 ounces of laudanum exhibited in two hours, with perfect relief in a case of great severity, when all other remedies had failed of even mitigating the symptoms. Very respectfulty,

East Windsor, May 20, 1843. H. Watson.

ALTERING COLTS.

Editors of the Cultivator—The treatment of animals has arrested my attention from the time when as a boy, I have witnessed, in the lower part of this state and S. Carolina, the yearly collection of marsh tackies, calves, &c., for the purpose of marking, branding, cutting out the lampas, emasculating, docking, &c., and to this time I have hailed with pleasure any improvement, especially in the treatment of that noble animal, the Horse. By degrees I have seen the barbarous practice of burning out the lampas and cutting out the hooks, give way, at least among the enlightened, to the more rational, and I think more curative practice of depletion and change of food.

And now, having witnessed, I am induced to describe to you an improvement in the emasculation of the horse, which strikes me as being well worthy of being generally known.

When I came to this neighborhood a few years ago, I was told of a man who performed the operation without tieing the horse in any way, and I am free to confess that I thought it was a mistake; but now, to me, seeing is believing, although it yet appears strange. Being at the house of a friend on Saturday last, I had an opportunity of seeing the performance under the following circumstances:

A three years old colt, with a simple bridle on, was backed into the corner of a worm rail fence, where he was held by a youth of sixteen, without any other restraint than the bridle and fence. The operator approached the animal with the same calm *sang froid* that an old bee-master handles a hive which he is about to rob of its honey; going to the right side, he laid hold of the bag with the left hand, and with the right laid open one testicle, and separated it in the usual way; and then did the same with the other, and so left them without any ligature; he then enlarged the opening in the envelop skin so that all the blood which came might freely fall off; a spoonful of lard and salt was then laid in to prevent an accumulation of coagulated blood on the parts, and he was then unbridled and turned loose. During the operation, there were no great efforts made by the horse to get away, and he was easily held in by the bridle; he appeared to incline towards the operator, as horses frequently do when they are tickled by the curry-comb; and once or twice he threw up the near hind leg as if to drive off a fly. There were no evidences of his suffering pain, such as groaning or the like. The man said he had operated on hundreds, and never lost one, or had been kicked but by one, and was successful with either old or young horses. A. S.

Oakland Farm, near Lebanon, Cobb co., Geo., 1843.

SPAYING SWINE.

Messrs. Gaylord & Tucker—I have seen several directions given for spaying swine; none however, I think, superior to mine, which is as follows: I have a crooked stick, in the form of the arm when half bent, about 18 inches long; to each end I attach a string, doubled, about 8 or 10 inches long, which I put in a noose over the hind legs, just above the hocks; hang them up head downward; tie the mouth to prevent squealing; let a boy stand at their back and hold the fore legs. I then with a sharp knife split the belly just between the hind four teats, sufficient to insert two or three fingers of the left hand, draw out the pride, and cut it off with the knife in the right hand; then with a large crooked needle and waxed thread, sow up the wound in the following manner: stick the needle through from outside to inside, then bring out the needle on the other side of the wound, from inside to outside; cut off the thread sufficiently long to tie; repeat the same so as to make three stitches; then tie them, being careful not to draw the sticthes too tight, and the work is done. I believe I can spay as many in a given length of time and with as little loss, as any man can any other way. John M. Johnson.

Hannibal, Mo., May 25, 1843.

Mange or Mad Itch in Swine.—A correspondent of the Maine Farmer recommends the following: "Take raw tobacco steeped cold and strong in chamber lie, pour off the clear liquor, then mix it, equal parts, with lamp oil, and then rub on the composition. It is a safe and sovereign remedy for mange, in all stages and all animals, brute or human. This ointment, if kept in a tight bottle, will keep good any length of time. It should be well shaken together when used, for the parts soon separate when standing."

Domestic Economy.

BUTTER MAKING.

Messrs. Gaylord & Tucker—I observed in your last paper, that some lady is desirous of obtaining particular information in regard to the process of making, and management of butter. For fear that those *actively* engaged in the employment, may not take time to satisfy her inquiries, I have concluded to give her and her "neighbors" my own ideas on the subject, derived from past experience.

Some thirteen or fourteen years ago, with but little more knowledge of the matter than your correspondent professes to have, I undertook the charge of a small dairy. I found there was an English dairy woman in the neighborhood, whose butter was the criterion by which all other butter was judged, when submitted to the epicures in that article. With the aid of her friendly instructions, and such books on the subject as I could resort to, a satisfactory result was soon obtained.

The first requisite to the production of good butter is *good cows.* By good cows, I mean those that will give plenty of such milk as will yield a large quantity of good butter. It is a well known fact that cows running in the same pasture, or fed precisely alike, will afford butter varying much in quality. A poor cow is more injury to the dairy than she is worth, and should therefore be rejected. I have always observed that cows which gave the richest milk, generally have soft, velvet-like *yellow* skins. I will not say of what tint the *hair* should be, as I should not like to commit myself on the long vexed and important question of *color.*

Cows, to yield good butter, as every farmer and dairy woman knows, should have *good keeping.* Plenty of good succulent food, both in summer and winter.

The *Dairy House* should be cool and airy, commanding plenty of pure cold water, either by a running stream, or by pipes laid from a well; ice, too, is an excellent auxiliary. Wood or stone troughs, which can be kept full of water, are very good to set the pans of milk in.

Great care should be taken that every thing connected with the dairy, should be managed with the most scrupulous *neatness.*

If milking is done but twice a day, the time should be divided as nearly equal as convenient. The milk should be carried to the place where the dairy work is done, immediately strained, and left a short time for the warm steam to pass off, before it is carried into the dairy.

Of all the pans I have used, I much prefer the tin. They are lighter, less expensive in the end, and easier kept clean. Zinc is not fit to keep milk in at all, as a slight degree of acidity decomposes a certain portion of the zinc. From 24 to 48 hours is sufficient time for the milk to stand before skimming. I should much prefer that milk should never *sour* before the cream is taken off. Some persons think it highly important that cream should acquire a certain degree of acidity before churning, but I can confidently affirm that the best butter I ever made, was from cream that was perfectly sweet when the churning was commenced. The remarks of a writer in a late number of the "Maine Farmer," so exactly coincide with my own views, that I will give them in his own language:

"Butter is an article which is very ready to receive a flavor from any gas, or from contact with other substances, unless it is entirely freed from every particle of its mucilage." He says further, that "the mottled or streaked appearance in butter, is owing to the coagulated lymph, coagulated from souring; it is indissoluble in water, and can never be worked out of the butter. Salt should not be added at the *commencement* of the first working, as it is kown to every housewife that salt will curdle sour buttermilk, and should also be known that curd once formed in with butter, can never be worked out. They can work out the whey and leave the butter apparently dry, but the cause of the mischief is still left. Incipient decay has already commenced in the coagulum or curd, and will proceed, unless something can be applied that will put an entire stop to it."

The frequency of churning may be regulated according to the quantity of cream and state of the weather.[*] The best churn for a moderate sized dairy, that I have any knowledge of, is "Gault's Patent." It operates easily and effectually. It may be had of Ruggles, Nourse & Mason, Boston, and probably at other implement stores. In the largest size, from one to twenty-five pounds of butter can be made at a time.

Experience has led me to deprecate the practice of *washing* butter, when it can possibly be managed without. Butter that comes so soft as to require cold water to harden it, cannot by washing, be made to keep sweet any length of time. When the butter is taken from the churn, and the buttermilk worked out, put in $1\frac{1}{4}$ oz. best salt to one pound of fresh butter; or if the buttermilk is not well worked out, more salt will be needed. Set it away in mass for 24 hours in a cool place, when every particle of moisture should be extracted, and the butter made into rolls or prints for use. For this purpose, a flat smooth board or marble slab is necessary; a flat surface is preferable to a dish, as you can so much more easily get rid of the moisture from the butter. Some use a wooden slice or spatula, to handle the butter with; this requires more strength, especially if the butter is hard, than is required by the use of the hand alone. To prepare the hands for working butter, rub them well with wet corn meal, then wash in water as hot as can be borne, plunge them in cold water for a moment, and you are ready to handle butter in the warmest weather without melting it, if it is done early in the morning, before the hands get heated by exercise.

Butter for keeping, should be made when the weather is cool. To every pound of fresh butter, add $1\frac{1}{4}$ oz. best salt, and $\frac{3}{4}$ oz. saltpetre, taking *particular* care to extract every *particle* of moisture, as on this mainly depends the future excellence of the article. Pack close in stone jars. Doubtless every one has observed when butter is not well worked, the watery particles diffuse through it, destroying that *waxy* appearance so much prized by lovers of good butter.

Salt should never be used for butter without *sifting;* it is extremely disagreeable to encounter lumps of salt, either in spreading or eating what *should* be such a luxury.

Winter butter can be made as good in color and consistence, as at any other season of the year. This assertion will perhaps appear strange to some of *my neighbors,* as the bad quality of the butter in our market, has been a subject of continual complaint and inquiry during the past winter. To find one of the causes, no one need go far. Let him only ride 20 miles in any direction, during the severe winter just past, and he would have seen hundreds of these poor abused creatures, the cows, standing around, (not even permitted to enter,) the log barns which appear to have been made expressly for *free ventilation,* chewing the cud, not of "sweet and bitter fancy," but some old dry cornstalk, or perchance, if so fortunate as to have a saw mill in their vicinity, a nice strip of bark gnawed from a log that had lain in water till sour and half rotten; looking for all the world as if they could give their owner more *tears* than milk. This is no "fancy sketch"—and now, need one ask why the butter is poor?

With good cows, well fed, and a place to raise the cream without freezing, there is no difficulty in the matter. If the natural richness of the milk does not impart sufficient color, take deep colored carrots, (the Altringham is best,) grate fine, pour boiling water on the pulp, and strain into the cream till sufficiently colored; so far from imparting a *carroty* taste, it gives additional sweetness and richness to the butter. Yolks of eggs beaten up, two to a gallon of cream, do very well. These are the only coloring materials I ever used.

I have extended this communication to a greater length than I intended, and if I have been led into prolixity, (which, by the way, I detest,) a desire to assist *beginners,* for whom I have written, must be my apology. Should any experienced dairy woman be in possession of important facts on this, or any other subject, which are not familiar to all, I hope she will not withhold them from your readers. M. W. H.

Zanesville, O., May 30, 1843.

Messrs. Gaylord & Tucker—Reading the Cultivator last evening, I saw a request that some one would furnish an article on making butter. The following is at your disposal. There is a great deficiency in the art of taking care of milk and making good butter. Many think they must have Durham cows or Goshen milk sellars, or they cannot make butter to command a high price; but I know from experience, that this is not the case. My butter always commands a high price and ready sale. I think the sisters will not be offended if I write a little, seeing men have wrote so much on the subject. One man wrote a piece sometime ago, without fear of contradiction, that washing butter was the best mode of cleansing it. Good butter can be made without cold water. I don't use any about my butter. I skim my milk as soon as it begins to sour, and churn very often. When churned, I scrape it down with my hand, take it out with a ladle, salt it well, and put it in the cellar till morning. I always churn at night, then work out all the buttermilk I can, and put it away till I get two or three churnings, then work it over again and pack it down—turn on strong brine two or three inches deep. This I turn off and on, as often as I want to lay down, till my tub is filled. Keep on the brine, and make butter this way, and you will not have to use cold water to wash out the sour milk; but let me tell you, if you want to make good butter and a good deal of it, you must see to it yourself—hired help will not. You must have plenty of pans—strain them half full—you will get a great deal more cream than in any other way. This I know from experience. I scald my pans and pails in boiling water. Our cows are milked early at night and early in the morning, so to divide time equally. My cream is kept in the cellar, churned at night in a cool place. I weigh my butter when I work it over. I made last season from three cows, seven hundred and fifty-three pounds of butter; sold five hundred and sixty for $12\frac{1}{2}$ and 10 cents per pound, in Hamilton village. We raised three calves, and made some cheese. Cows, common breed; one eight, and two four years old. If any one can beat me in quality or quantity, I would like to see it—by washing or any other process. Ladies take courage. This season see what you can do. Don't let Durhams and Herefords beat us. For my part I don't believe they are what they are cracked up to be. If farmers would take more pains to have good feed for their cows, they would be well paid for their trouble. Our cows were pastured on four acres of seed clover till after feed. I think the old fashioned churn the best; tin pans likewise. Keep your cellar free from air if you want it cool. L. B., A FARMER'S WIFE.

Earlville, N. Y., May 12, 1843.

The Garden and the Orchard.

BASSANO BEET.

In compliance with the request of the Editors of the Cultivator, I can inform them that I have cultivated this beet for the two past years, and consider it decidedly the best beet for table use which I know. The roots are as flat as the flat Norfolk turnep, and grow as large; often eight inches in diameter on fertile soil. They grow mostly above ground, and are consequently easily gathered. They suffer less by being crowded than any other root I am acquainted with, often attaining considerable size when growing in actual contact. As an *early* beet, it is very excellent; and it may prove one of the best field crops we can cultivate. Specimens were exhibited at the State Fair at Albany. J. J. T.

Macedon, N. Y., 1843.

NEW MODE OF GRAFTING.

Editors of Cultivator—Mr. C. L. Whiting of Granville, showed me a mode of grafting which I do not recollect having before heard of. It was done by taking young trees or sprouts from the root or stump of a tree, of the size of the finger, splitting them through the center at intervals of a foot or so, inserting scions in these splits at right angles with the tree, and then bending down the tree and covering it slightly with earth—leaving above the surface two or three buds of the scions, and leaving out, also, a few inches of the top of the tree. Thus fixed, it is said each scion will become a tree, and when sufficiently grown, may be taken out and transplanted. Mr. Whiting showed me several apple trees which had been grafted in this way, one of which had some half dozen pear scions in it, that all appeared growing well.

PROTECTING TREES FROM CATTLE AND HORSES.

Messrs. Gaylord & Tucker—It not unfrequently happens when trees are taken from the nursery or from the forest to be transplanted, that we are obliged to set them where cattle and horses can reach them. To prevent them from injuring them, if they are small, I drive a stake firmly by their side, and nail a piece of basswood bark fast to the stake, with the inside of the bark towards the tree. I then twist a band of hay or grass and braid it around the tree, commencing at the top of the bark, in order to prevent the tree from wearing against the bark as it curls around it. If the barks are green they will need no binding, for the influence of the sun will soon fasten them. S. E. T.

Lansing, Tompkins co., N. Y., 1843.

SALT FOR THE CURCULIO.

We copy the following from Hovey's "Magazine of Horticulture," for June. The suggestions are well worthy of consideration:

"Now that the season is approaching when the Curculio begins to emerge from the ground, we are induced to request fruit cultivators to try the effect of salt in destroying them. We have been assured by several experienced fruit cultivators, that they have found salt a perfect preventive against the ravages of this destructive insect, and that they have had annually good crops of plums, while their neighbors have lost a large portion of their fruit. Our friend, Capt. Lovett of Beverly, informs us that he has applied half a peck or more of salt to each tree, spreading it on the ground as far as the branches extend. This is done about the first of June, and as it is washed into the ground by the rains, it appears to prevent the Curculio from making his way alive through it. The salt does not appear to injure the tree in the least. We would advise all our friends who have plum trees subject to the attacks of the Curculio, to try this remedy, and send us an account of their experiments for publication, in order that all the information possible may be elicited which may lead to a certain remedy for this insidious enemy of the plum cultivator."

Vermin on Vines.—We hope our gardeners will make various trials this summer, to destroy the bugs and worms that are so officious among garden plants. Charcoal dust can be readily procured in most places, and this article is beneficial to the plants in several ways—it improves the soil by attracting nitrous substances, and it raises the temperature about the plants around which it is placed, since the rays from the sun are not reflected back as they are from light colored substances. But charcoal dust is always offensive to insects and grubs, and though it may not kill them, it will drive them away. A little may be sifted over the plants every day or two, and we incline to think that charcoal will prove to be as good an article as any that has been recommended for garden plants.—*Mass. Plowman.*

Quince Trees.—These should be pruned but little where the limbs ride; should be watered with strong soap suds; have ashes placed about them three times in the course of the season. Those branches which grow very near the ground, may be laid down and covered with earth five or six inches deep, leaving six inches or a foot, or more, according to the length of the limb. Thus you can obtain new trees, to be taken up and transplanted next spring.—*Farmer's Advocate.*

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[*] In cold weather the cream should be brought to the fire sometime before churning. I think about 65° Farenheit, is about the right temperature.

AGRICULTURAL INSTITUTE.

WE are gratified to have it in our power to make the announcement contained in the following extract of a letter, just received from the Rev. B. G. NOBLE, of Bridgeport, Conn. It will be seen that he contemplates the establishment of an Agricultural Institute, where our young men may have an opportunity of qualifying themselves "for the noble pursuits of agriculture, and at the same time for bearing their part in the elevated stations of society." The location, the situation of the writer's farm, his qualifications and long experience as an instructor, as well as his taste for agricultural pursuits, are circumstances in the highest degree favorable to the success and usefulness of the proposed institution; and we cannot but rejoice that an establishment of this kind is about to be commenced under auspices so promising:

"*Bridgeport, June* 22, 1843.

"MESSRS. GAYLORD & TUCKER—Your article in the June no., first page, headed 'young men,' has led me to communicate to you a determination formed several months since, and intended to be made public as soon as my arrangements had been all completed. I am not aware that any institution has yet been commenced which is adapted to the training of youth in those departments of learning which would qualify them for the noble pursuits of agriculture, and at the same time for bearing their part in the elevated stations of society.

"It is my intention to establish in this place, an agricultural institute, which shall combine all the advantages that may be desirable in such an establishment, both in theory and practice. Such a liberal course of instruction will be adopted, as shall be best calculated to elevate the character and extend the influence of those who may devote themselves to the pursuits of agriculture. It will include the natural sciences, political economy, moral philosophy, the great principles of civil and constitutional law, and the art of public speaking, as well as all the ordinary branches of a finished English education.

"My location is well suited for such an institution. It is on the east bank of our harbor, within a few minutes walk of our churches, and yet so retired, rural and beautiful, as to be in every way suited for the residence of pupils. Two steamboats run each way daily, between this and New-York, and the Housatonic railroad connects us with the interior, Albany and Boston. Sixty acres of land lying in one tract, (enough for all the purposes of such an establishment,) surround my residence—presenting from every part of it, agreeable views, and nearly all of it under cultivation. I am, if not an enthusiast, very fond of the business, both of instruction and agriculture. For some twenty years, I united the teaching of the classics with the duties of a parish. Several years since, I retired to my present residence, and have been engaged chiefly in farming and gardening, and in planting a nursery. I shall have in my employ, a skillful farmer, gardener and nurseryman, and the department of each will be conducted by system, and with studious regard both to economy and to scientific principles. While the pupil is connected with the establishment, it is intended that he shall witness all the operations of the agriculturist, and form such tastes and habits, that in after life he may combine the cultivation of the soil with intellectual improvement."

LETTER FROM ALABAMA.

EXTRACT of a letter to the Editors of the Cultivator, dated Eufalla, Barber co., Ala., June 13, 1843:

"We are moving at present, in this new and interesting section of country, in the cause of agriculture. From our success since the present year set in. I hope the day will not be distant when our agricultural societies will embrace every farmer in the country; and when our young men, when they leave college, instead of seeking a livelihood in one of the learned professions, will take hold of the handles of the plow, and become scientific farmers; when they will enjoy that peace and quietness that will be found in no other avocation.

"I am at present at page 80, in my yearly farming memorandum, as I call it, for the present year. A book of this kind, I have been in the habit of keeping for the last fifteen years; it is an exact record of every thing that is done on my farm, and without it for reference, I do not see how I could get on; for here I look over my last year's operations, and from year to year, I note down such suggestions as present themselves to my mind. I commence on the first day of January of each year, charge myself with every dollar's worth of property employed on my farm; then through the year I enter each Saturday night, the amount and kind of labor done on the farm, keeping an account of the seasons, the time of planting each kind of crop, keeping an exact entry of all the expenses of the farm.

"When the crop is sold, I give myself credit for all money received, for all stock raised and for all improvements made; I am then prepared to know precisely what interest I have made on the amount employed in agriculture. I have recommended this course to many farmers, but they say it is too much trouble; for my part, I find it no trouble; it has become a habit with me.

"Our crops in this section of the southwest, are small and backward; our spring has been unfavorable; there is nearly one month's difference between now and last year in our corn crop. But our great crop in this region is cotton; we make twice as much of that valuable staple as we should, for we make it to the exclusion of many valuable products that we buy, particularly pork and flour. We pay out money enough each year, in this county, for pork and flour, to pay all the debts of the county; but I hope we will soon become farmers, and not longer content ourselves with being mere planters. Hoping your valuable paper will meet with that encourment it so highly deserves, I subscribe myself respectfully yours, ALEXANDER M'DONALD."

FACTS AND OPINIONS.

Abstracted from Books and Journals for the Cultivator.

TANNER'S BARK. We quote the following from the editor of the American Farmer:—"Tan may be used fresh from the pit, if used sparingly, without doing injury; if used in excess, it will, like salt, destroy vegetation. In moderation, both are excellent manures. As an amender of a stiff clay soil, we know of nothing better than tanner's bark: when spread over cow yards or pig pens it is invaluable as an absorbent, and when, after a single season, it becomes mixed with the other substances, it forms an excellent manure; when mixed in the following proportions, 200 bushels tanner's bark, 20 of lime and 50 of ashes, and suffered to remain a month or so in the heap, the mixture, after being turned over and thoroughly incorporated, forms as good a manuring as any farmer need desire to put on an acre of ground."

ASHES ON COTTON.—A correspondent of the Southern Agriculturist, details two experiments in the use of wood ashes on the cotton plant. In the first, which was an old field of light soil, manured with stable compost, 12 rows were selected, to which one peck of ashes to the row were applied, or at the rate of $18\frac{3}{4}$ bushels per acre. These 12 rows, with 12 rows without ashes, were harvested separately. The ashed rows produced 100 lbs. of seed cotton—those without ashes 82 lbs. In the second experiment, the ashes were applied to new land, when no difference was discovered between the rows with and those without ashes. Hence the writer infers that in the old field the alkaline properties in the soil were exhausted, while in the new field a sufficient quantity for all useful purposes still remained in the soil.

CORNSTALK SUGAR.—Mr. S. Baldwin of Franklin co., Ohio, details his experience in making sugar from cornstalks the last season. The expressed juice indicated nine per cent of saccharine matter by the saccharometer, and one gallon produced more than one pound of sugar, which is more than is usually made from the cane. From want of experience he failed, as most others have done, in making the syrup granulate; but the molasses which did not granulate, was a most excellent article for family use, of a most delicious flavor, and was found to be very wholesome.

CABBAGE LICE.—The Southern Planter says that Mr. J. C. Burton of Henrico, has for several years been in the habit of freeing his cabbage not only from lice but from the ravages of the yellow worm, by simply mashing a clod of dirt between his fingers, and sprinkling the dust over the cabbages, in the morning before the dew has been evaporated.

SHEEP IN ORCHARDS.—A writer in the N. E. Farmer, states that "a butcher at Brighton, put his sheep into an orchard, and while the next orchard, separated from his only by a stone wall, was infested with canker worms, his had none." From this, the writer concludes that "there is an odor to sheep so offensive that the canker worms are driven away by it, or that it is a deadly poison to them."

HEN'S EGGS.—A correspondent of the Farmer's Cabinet, states that in often repeated trials he found that the eggs which approached nearest to roundness always produced females, while those which were pointed at one end always produced males. This is a fact of some importance to those who rear chickens for market, who prefer males on account of their larger size.

SUCKERING CORN.—D. H. Hatton, in the Southern Planter, says that after a trial of five years, he has satisfied himself that irreparable injury is done to the corn by pulling off the suckers, as the produce of fodder and grain are both greatly diminished.

TO CLEAN KID GLOVES.—We quote the following recipe for this purpose, from the papers:—"Take a piece of flannel, moisten it with a little milk, rub it on a cake of nice hard soap, and then apply it to the soiled part of the glove. As soon as you have removed the dirt, rub the spot with a dry piece of flannel. Care must be taken not to make the glove too wet."

TRIMBLE'S IMPROVED HORSE POWER AND THRESHING MACHINE.

THE subscriber offers for sale Trimble's Horse Power and Threshing Machines, which are equal to any in use. They can be used either with one or two horses, and can thresh 15 bushels of wheat per hour, with ease.

Price of Horse Power, ... $55
" Threshing Machine, ... 25

B. M FEEBORN,
July 1—2t. Agricultural Repository, 183 Front st., N. Y.

BADGER'S HORSE POWER, &c.

BADGER'S Horse Power, of which a cut and description is given in another part of this paper, is manufactured at Auburn, N. Y., by the subscribers. The price for

Horse Power and Thresher, ... $115·00
Horse Power alone .... 90·00

Also manufactured and for sale by the subscribers, Hussey's REAPING MACHINE and CORN CRUSHER, which took the first premiums at the State Fair held at Albany, in 1842. All orders punctually attended to.

HUSSEY & BURGESS.
Auburn, N. Y. May 16, 1843. 2t.

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SHORT HORN DURHAMS.

THREE or four Durham Heifers, one and two years old and three young Bulls, from 10 to 13 months old are offered for sale by the subscriber. Some of these young animals are out of his imported Bull Duke of Wellington, bred by Thomas Bates, Esq., Kirkleavington, England. The stock of Wellington will carry its own recommendation. The two year old Heifers are, and will be in calf, by Wellington or his son Meteor, out of his imported Heifer Dutchess, which latter animal was also bred by Mr. Bates, and out of his Prize Bull Duke of Northumberland. Inquire of A. Clockie, on the farm, or of the subscriber, at his residence in Troy. GEO. VAIL.
Troy, July 1, 1843—2t.

WARREN'S NEWLY INVENTED HORSE POWER AND THRESHING MACHINE.

THE prices of these highly valuable machines, are as follows, viz:

For a Two Horse Power and Threshing Machine, together, $75
" One " " " " " 60
" Two Horse Power Machine, alone, ... 50
" One " " " " 40

Payment to be made in this city, on delivery of Machines. Bands not furnished except by particular order—price $4 each. Orders, post paid, executed promptly.

L. Bostwick,
J. Plant,
W. T. Cole.
L. BOSTWICK & CO.
58 Water st.
New-York June 17, 1843—jytf.

SALE OF DURHAM SHORT HORN CATTLE AND SOUTH DOWN SHEEP.

THE subscriber, desirous of reducing his stock, will offer for sale, at auction, on Wednesday, the 15th of September next, at 10 o'clock, A. M. at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers and calves, and between 70 and 80 head of South Down sheep, consisting of bucks, breeding ewes, yearlings and lambs, bred from the stock imported by Mr. Hawes in 1832, and from bucks imported since.

Messrs Corning & Sotham, will also offer at the same time and place, some of their celebrated HEREFORD BULLS, of different ages. C. N. BEMENT.
Three Hills Farm, Albany, June 1, 1843. 4t.

PLOWS, PLOWS.

THE subscriber has just received an extensive assortment of Center Draft Self-Sharpening Plows, made from the best materials, and are warranted to work well. Also Subsoil Plows of three sizes, suitable for one, two or three horses, for sale at the following prices, viz:—No. 1, $8; No. 2, $10; No 3, $12, with an extra point to each. Also Straw Cutters, Corn Shellers, Corn Planters, Fanning Mills, Hoes, Spades, Shovels, &c. Garden, Grass, and Flower Seeds, for sale at wholesale and retail, on liberal terms, by D. O. PROUTY,
May 15, 1843. 2t. No. 176 Market st., Philadelphia

CUMMINGTON SCYTHE STONES.

THE attention of farmers and all who use whetstone, throughout the United States, is respectfully invited to an article now manufactured from the celebrated "Robbin's Ledge," by J. S. Stafford & Co., Cummington, Mass. The decided superiority of these stones is acknowledged by all who have given them a trial, and the eager demand for them from those sections of the country into which they have been introduced, is the best recommendation that can be given them. The public are requested to satisfy themselves in regard to the merits of the above article, by giving it a trial. For sale at the manufactory; also by *Wood & Folger*, 219 Pearl-street; *William H. Wight & Co.*, 100 John-street, and *Clark & Wilson*, 7 Platt-street, New-York—*Humphrey & Lansing*, and *Van Alstyne & Son*, Albany—*Kelloggs & Co.*, *Warren. Lesly & Hart*, Troy, N. Y., and will be furnished at the principal villages throughout the country.

Orders addressed to FRANCIS BATES, Agent, Cummington, Mass., will be punctually attended to. April 11, 1843.—3t

TO FARMERS.

THE subscriber is prepared to supply Compound Guano, prepared from an analysis of that valuable manure. Also, dry Sulphate of Soda, Sulphate of Ammonia, &c. He has 5,000 to 10,000 bushels of Hard Wood Charcoal, which he will sell at 4 cents per bushel. Estimates will be given for any description of Chemical Manures that may be required. Engaged in chemical manufacturing for thirty years, he feels confident of giving satisfaction to those who may favor him with their orders. All letters asking information must be post paid.

JOHN BARLING, foot Jane-street, Greenwich.
New-York, April 28, 1843.—6t

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

CONVENTION OF BREEDERS.—The convention of breeders heretofore called, by notice in the several Agricultural papers, to be held in New-York during the ensuing Fair of the American Institute, will commence its session at the Library of the Institute, on Tuesday evening, Oct. 17, at half past 7 o'clock, when it is hoped that all those who feel an interest in the objects for which it is called, will be present.

STATE CATTLE SHOW AND FAIR,

At Rochester, Sept. 20 *and* 21, 1843.

IT will be seen by a notice in this paper, that a meeting of the Executive Committee of the N. Y. S. Ag. Society was held at Rochester, on the 12th ult., at which all the preparatory arrangements were made for the ensuing State Fair. The ground selected as the place of exhibition, is admirably fitted for the purpose, being elevated and dry, with a thick substantial turf, and situate on one of the principal streets, less than a mile from the center of the city, with a good M'Adam road and side-walks leading to it. Eight or ten acres are to be enclosed with a high fence, in the center of which a building, 40 by 150 feet, is to be erected for the exhibition of Horticultural and Domestic products, in which, if we do not misjudge, the exhibition will far exceed any thing that has gone before it. We also anticipate an exhibition of farm stock in many respects superior even to that held in this city last autumn. There may not, and probably will not be as great a number of pure bred cattle as at Albany, but in mixed and native breeds—in horses, working oxen and steers, Western New-York can, if she will but come up to the work, far excel the show here; and in sheep and swine they can at least equal us. The farmers of western New-York, and of the Genesee Valley particularly, should remember that their reputation is at stake, and bring up the finest of their flocks and herds to the Show; if they do not, their beautiful and fertile Valley will lose, in a great measure, the high esteem in which it is now held by the multitude who will visit the Fair, not only from other sections of their own state, but from all the other states and from the Canadas. But we do not apprehend any failure on their part; and we say say then to our readers and friends in all sections, prepare yourselves to meet with us on this great holiday of our farmers, for here you shall see and hear that which will raise your idea of the dignity of your profession, and excite an increased desire for the attainment of that "improvement of the mind and the soil," by which alone you can acquire your just rank in our civil and social relations, and secure the just reward which is ever returned by an all-bountiful Providence to him who tills the earth with industry and intelligence.

During the Fair there will be an Address delivered by one of our most eminent statesmen, and a public dinner, the arrangements for which will be such, we trust, as to draw together around the festive board, a large number of the elite of our husbandmen and citizens.

The Executive Committee were very much gratified by the warm interest manifested by such of the citizens of Rochester as were present at their late meeting, and the determination expressed by them to do every thing necessary on their part to give interest to the Fair, and to crown with success the labors of the Society.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from Lyttleton Physick, Seth Whalen, S. Peck, T. M. Niven, John R. Blair, S. Fouché, Richmond, H. W. S. C., A Subscriber, Wm. Jennison, A. E. Cowles, Alex. M'Donald, D., D. C. Goodale, R. Harmon, jr., J. R. A., A Lover of Science, S. F. Vinton, A Saratoga Co. Farmer, D. K. Minor, A Subscriber at Liberty Mills., A. B. N., S. W. Jewett.

ACKNOWLEDGMENTS.—The pair of Capons sent us by Dr. J. N. KEELER, Pemberton, N. J., and for which he has our thanks, came safe to hand. We shall endeavor to give a good account of them after Christmas.—We are under renewed obligations to the Editors of the *New Farmer's Journal*, London, for the continued files of that excellent paper, which are regularly received by the steamers at Boston. It will give us pleasure to return the favor in any way in our power.—To some unknown friend in London, we are indebted for the nos. of the *Mark Lane Express* of June 26, and July 3.—To J. H. KING, Esq. Georgetown, D. C., for the *Georgetown Advocate*, containing a notice of the seventeen year locusts. —To D. K. MINOR, New-York, for copies of Part III. of Prof. Johnston's "Lectures on the applications of Chemistry and Geology to Agriculture."—To the Author, for a copy of "Thirty Years from Home, or a Voice from the Main Deck, by Samuel Leech."—To the Editors, for Silliman's Journal for July.—To J. R. SPEED, Esq. for the Prize List of the Tompkins Ag. Society.—To J. J. THOMAS, for the Prize List of the Wayne Co. Ag. Society.—To. J. BUEL, Esq. for early Potatoes.—To the Publishers, for Parts 10 and 11, of the Farmer's Encyclopedia.

J. W., *Lafayette.*—Your suggestion is under consideration, and we think it not unlikely the course recommended may be adopted another year.

A SUBSCRIBER, *Marietta, Pa.*—We will publish the plans and information asked for, as soon as they can be procured.

A SARATOGA CO. FARMER will find his inquiry answered on page 123 of this paper.

A. M'D., *Barbor co., Ala.*—Good milch cows, of the common breed of the country, can be had at $25 to $50, according to quality. As any considerable number would have to be selected from different lots, there would be no reduction on account of the number being increased.

"*A Subscriber,*" at Liberty Mills, Va., shall be attended to in due time.

☞ An answer to the inquiry of our friend Z. D., we find is accidentally omitted. It will appear next month.

CORNSTALK SUGAR.—The letter of our correspondent on the subject of the premium offered by the State Society for the best experiment in making sugar from the Cornstalk, and expressing the wish that the requirement of *iron* rollers might be omitted, was submitted to the Board at its last meeting; but the object of the Society being to ascertain the maximum quantity to be obtained from an acre, which it was thought could not be obtained by wooden rollers, they declined making the change asked for. The same correspondent suggests that owing to the backwardness of the corn crop, it may not be possible to complete the experiment in season to report at the State Fair in September. Should this be the case, the question will undoubtedly be left for decision at the annual meeting in January next. We should be glad to hear whether any, and how many, are preparing to compete for the $100 premium offered by the Society.

FRUIT TREES.—The letter of Mr. CHARLES HAMILTON, together with a Catalogue of his Nursery at Canterbury, Orange co., N. Y., has been received. Mr. H. says he has added to his collection an Apple called the Summer Spitzenburgh, valuable for its early maturity—a Plum called the Winter Bolmar, very late and good, and a Pear, which he has named Rip Van Winkle. The scions from which this pear is grown, are taken from a seedling tree, which he says has borne fruit every year but one since 1816, when it first commenced bearing. If we understand his letter aright, the fruit commences ripening the latter part of August, and continues to ripen for two months, so that ripe fruit can be picked from it from the last of August to the last of October. We shall be glad to receive a more particular description of the tree, with the fruit he proposes to send us. It may be sent by any of the steamboats coming to this city from New-York. A part of the fruit promised us, shall be sent to the Mass. Hort. Society.

Moore co., N. C., July 1, 1843.—"With but little trouble, I have been enabled to procure you eight good subscribers, and enclosed you will find eight dollars to pay for them. This has only cost the ride of a few hours, and think in a short time I can send you a few more. I would have been a subscriber long ago to the Cultivator, had I known how very valuable it was, even to a *southern planter*. We are near a hundred years behind your New-York farming; but I am happy to say that within a few years I have seen much improvement, for we are absolutely beginning to manure now, which was not the case a few years ago. We are gradually quitting cotton in this section, which I hail as an omen of better times for the farmers, for it is difficult to improve or even to keep up a cotton plantation."

THE WHEAT CROP.—We give, in another part of this paper, a letter from Gen. HARMON of Wheatland, in which he expresses the opinion that the wheat crop of Western New-York will not this year produce much over half the ordinary yield. This falling off, however, will not, in our opinion, materially affect the prices of this great staple, inasmuch as from what we hear from all sections of our country where wheat is grown, we are inclined to believe that the total amount produced will fully equal if not exceed any previous crop. In some sections the causes mentioned by Gen. H., and the severe winter, have nearly destroyed the crop, so much so indeed that in many places the seed even will not be returned; but in other and much larger portions of the wheat growing districts, the yield will be a bountiful one.

SEED WHEAT.—While at Rochester recently, we had the pleasure of examining various specimens of wheat on the stalk, from the experiment field of Gen. Harmon, who is performing a most important service for our wheat growers, by the care with which he is testing by actual experiment, all the different varieties of wheat which promise to be an acquisition to our country. Among the specimens exhibited, were the Talivera, White Provence, Mediterranean, Virginia May, Wheatland Red, Hutchinson, Soules, and White Flint. To the latter, so long cultivated in the Genesee Valley, Gen. H. gives the preference over all others; but he thinks that some of the other kinds, when they become thoroughly acclimated, may prove of equal or greater value; and that their merits may be thoroughly tested, he will continue to cultivate all these and many other varieties in his "experiment field," from which he hopes ere long to produce some kinds of very superior quality. We trust he will succeed, but in any event he will richly deserve the thanks of our wheat growers for his presevering and well directed efforts.

Davenport, Iowa, July 7, 1843.—"Our wheat crop in this vicinity, and south in this territory, is nearly all destroyed. In Scott county, we shall not harvest as many bushels as we sowed, and my own case is that of every body else. From fifty acres of winter wheat, I shall not harvest as many bushels. From the Maquoqueta river north, both in Iowa and Wiskonsan, the wheat crop never looked better. Our own loss is attributable to the severe winter and the want of snow in January and February."

☞ A list of Cattle Shows to be held this season, prepared for this number, is necessarily deferred till our next.

EFFECT OF PLASTER IN HASTENING THE MATURITY OF PLANTS.

A correspondent in Louisiana, J. PRITCHARD, Esq., says he has seen it stated that manuring corn with gypsum hastens its maturity some ten or twelve days, and asks whether such is the fact; suggesting at the same time, that if that substance on trial should produce the same effect on the cane, it would be invaluable, as the cane rarely is all matured previous to the approach of frost.

There can be no doubt that all manures that are so applied as to promote the early growth of a plant, will in the same degree hasten its maturity. Every farmer knows that the corn first fit to roast, and first ripe, is in those parts of his field where the early growth of the plants was the most vigorous and best sustained. Immature corn is found where the growth has been slow from the first, or where, if rapid, it has been confined to the latter part of the season. The cause of this is obvious to all; arising as it does from the want of the elaborated juices necessary to the perfection of the seed. Any course of treatment that will hasten the growth of the sugar cane in the early part of its growth, will in the same degree hasten its maturity. Whether plaster will do this, can be easily ascertained by experiment; although as they belong to the same family of plants, it is natural to suppose the effect on sugar cane would be the same as on corn.

THE HOFWYL AGRICULTURAL ESTABLISHMENT

More than thirty years ago, a gentleman, the head of a respectable patrician family in the vicinity of Berne in Switzerland, strongly impressed with the wretched condition and ignorance of the peasantry around him; the miserable condition of their agriculture and agricultural implements; and the necessity of doing something for the amelioration of the laboring classes, conceived the idea of forming an establishment, which, beginning with the simplest elements of knowledge, should in its course ascend to the highest branches of science, embracing in a prominent manner the subject of agriculture, which he justly considered as deserving the first place in direct importance and utility. This gentleman, whose name was Fellenberg, possessed, about four miles from the city, an hereditary estate yielding at that time an income of about $2,000 per annum. The land forms part of a fine plain, surrounded by hills, and interspersed with woods; and the house and pleasure grounds are placed nearly in the center of the domain.

The establishment of Hofwyl is divided into four parts, and is probably one of the most complete and efficient in all its divisions, of any similar school in the world; indeed it may be said that Hofwyl has been the model upon which all others have been to a greater or less degree founded. It is remarkable that from the first, Mr. Fellenberg met with every kind of discouragement from those from whom he had a right to expect better things. Instead of lending him aid, the government interfered in every disagreeable and vexatious way; the common people regarded him as an enthusiast and visionary; while the patricians accused him of lowering his dignity and theirs, by condescending to engage in any pursuit that could render him useful to his fellow men. At first his plans were denounced as leading to his certain ruin; but when they saw that all his operations were gradually but surely succeeding, that pupils were flocking to Hofwyl, that the farm was constantly improving, that the marshes were drained, the soil rendered productive, fine crops taking the place of weeds, and that his poor laborers were rapidly bettering their habits and condition, while his income was increasing, then he was attacked as a selfish money making person, who under the garb of benevolence, was carrying on plans of avarice. Fortunately, Mr. Fellenberg was as unmoved by their clamors in one respect as the other, and pursued the even tenor of his way, introducing improvements as they were needed or suggested, and constantly extending his sphere of operations and usefulness.

The Hofwyl establishment embraces—1st. A school for the poor, somewhat on the principle of the manual labor system. With this is connected a farm of about 200 acres, which is under the immediate supervision of Mr. Fellenberg, and is principally cultivated by the pupils of the school, which usually number between 30 and 40. 2d. An academy for the sons of wealthier persons, and usually has from 50 to 60 pupils, principally from patrician families. At the time Mr. Brougham was there, seven or eight German princes, and many young nobles, were in this department, in which every branch of useful and elegant learning is taught by eminent professors, whose moral character and manners, are particularly attended to, in making the selection. 3d. An agricultural institute, with which is connected a small experimental farm, where the different kinds of plants, modes of culture, and improved or new implements, are submitted to a full and accurate trial. The regular students of this department usually number about twenty, and are more advanced in years than the pupils of the first section. They are carefully instructed in every thing relating to the science and practice of agriculture, hold daily conversations on the subject, have access to an extensive laboratory, cabinets of natural history, and philosophical apparatus, and witness all farming operations submitted to the test of actual experiment. 4th. A manufactory of farming machinery and implements. This is divided into two branches: one of common husbandry implements, the other for making experiments and improvements, and the first part defrays the expenses of the last. In this department of the establishment, the pupils of the academy are instructed in the handicraft arts; those of the institute in those connected with agriculture; and the poor boys of the farm, in such trades as may in after life afford them an honorable livelihood.

There is no doubt that the most interesting part of this establishment is the first, or the department for the education of the poor, which is under the personal supervision of Mr. Fellenberg; as by that the character of the poor laborers of the Canton has been much improved, as well as their condition bettered. It is by the action of the institute, or the third department, that the influence and fame of the school has been most spread, however, as from the graduates of this part, most of those chosen to superintend the many similar establishments that are springing up in European countries, have been selected. The pupils in the first department eat at Mr. Fellenberg's table, are all treated in precisely the same manner, all labor the same number of hours, and are all subjected to a constant and minute superintendence, in which the chief superintendent under Mr. Fellenberg, is much aided by the older boys, who have already become familiar with the studies, as well as the labors prescribed. Any of the pupils of the first department may continue the course in the second and third, if their means will admit, which but very few of the peasantry can do. The amount of agricultural products from the farm of the first department is very great, and the management is such as to command universal admiration.

On the plan of the establishment at Hofwyl, and principally under the direction of graduates from that place, numerous schools intended to promote the cause of agriculture and morals, have arisen in Germany; and their example has not been lost on other nations of Europe. One of the most extensive and successful of these schools is the one established at Kesthely in Hungary, by Count Festetis; and of which an interesting account is given in Bright's travels. This school provides for eight or ten pensioners, and as many independent students are admitted as choose to attend. The course lasts three years, and on a large experimental farm, all the details of agriculture, the management of forest and fruit trees, and the care of cattle, sheep, &c., are taught in the most scientific and practical manner. Connected with this establishment, is one in which girls are educated and instructed in the duties of housekeepers, management of dairies, &c. It is believed that not a single agricultural establishment of this kind abroad, has failed of realizing the high expectations of the founders, and they are now exercising a most healthy and salutary influence on the agricultural condition of Europe.

There seems to be a general impression in this country, that a large capital, and an extensive array of buildings, library, professorships, apparatus, &c. is necessary to commence an agricultural school. No idea can be more mistaken or fallacious. The necessary buildings for the pupils; a good farm, embracing a sufficient variety of soils for cultivation, and for illustrating the various operations of agriculture; a thorough, practical farmer, to oversee and manage the field operations; and a superintendent of judgment and science, are sufficient for all practical purposes at the outset. The library, and the required apparatus, need not be extensive at the beginning, and may be increased as the means are provided, and the course of labor and studies demand. Every thing about such an institution should be thoroughly imbued with the practical; for the visionary no room should be permitted. The order should be strict and undeviating; the government parental and mild, yet firm and unhesitating. There is a deep religious feeling, not a fanatic or enthusiastic one, pervading the Hofwyl establishment, which produces a most salutary influence, and without which, in a greater or less degree, the minds of the young are never trained to those habits of thought and inquiry so essential to the perfect man.

We have already had the pleasure of announcing to the readers of the Cultivator, the commencement of two agricultural schools in this country; that of Elm Craig near Nashville, Tennessee, under the superintendence of Mr. Fanning, one of the editors of the Agriculturist, and that of Eden Hill Farm Institute, on the banks of the Delaware, near Philadelphia, under the direction of Mr. Pedder, the conductor of the Farmer's Cabinet. It is needless to say, we expect much from these schools; the character of the men engaged justifies such anticipations. From these germs we hope to see similar institutions spreading, until every state at least, shall be provided with a well conducted Agricultural Institute. We hope another year will not pass, without one or more schools worthy of the state of New-York, being put in operation among us. We have pointed out above the indispensable things. An annual fee for admission from the pupils, would provide the means of lectures on Natural History, Chemistry, &c. &c.; cabinets of mineralogy, geology, and the other departments of the natural sciences would soon grow up and become extensive, under the fostering care of competent instructors; thorough instruction in all the branches of education necessary to qualify the man for the active business of life might be easily added where desired; and a full and complete course of agriculture in theory and practice, would soon render such schools a place far preferable and less expensive than most of our higher schools and colleges. Who can doubt that for men who are training for utility rather than for show, for action rather than for idleness, such institutions would soon receive the preference they would deserve? A kind Providence has decreed that we must remain as we are, essentially an agricultural people; a condition of all others the best adapted to promote health, happiness, and individual and national virtue; and we must be culpably neglectful of these best endowments of heaven, if we suffer any means to be unimproved calculated to advance this great cause.

A VIRGINIA FARM.

A correspondent of the Boston Traveler, writing from the valley of the Shenandoah, last autumn, gives the following account of the Steenbergen farm, situated in that valley, some 40 miles above Winchester. Few parts of the U. States afford examples of more fertile soils, and few instances of better cultivated farms than the rich valley of the Shenandoah.

"On ascending the opposite bank of the river, we entered the extensive grounds of the celebrated Steenbergen farm, a view of which is worth a day's journey in more oppressive heat than we experienced to-day. The farm consists of 7,000 acres, a large portion of intervale or bottom land, and nearly the whole is under cultivation. The family mansion is beautifully situated on rising ground, overlooking the whole area, and the farm houses are conveniently arranged in the vicinity for the overseers and slaves. The hay crop was gathered, and the quantity may be judged from the fact that from 1,500 to 2,000 head of cattle are kept on the premises. The wheat too, between 400 and 500 acres, had been harvested, and much of it was already threshed and sent to market. Our road passed through a luxuriant field of corn, nearly ripe, embracing a level tract of 600 acres, and a richer sight for the lover of scientific husbandry I have never seen. Mr. Steenbergen, who owned this unrivaled farm, and by his agricultural skill, extraordinary energy and perseverance, in a few years greatly improved the strength of the soil, rendered the property more valuable, probably, than any other farm in the U. States."

We may add here, as a warning to others, that not satisfied with this farm, Mr. S. became infected with the speculating notions at one time so prevalent; that he was with many others unfortunate, and when he failed some three or four years since, his liabilities amounted to more than a million and a half, of which about $650,000 was to the U. S. Bank. Mr. S. is now a resident of La Porte, Ind., and his farm has passed into the hands of Mr. Munn of Lynchburgh, Va.

SUMMER FALLOWS—SOWING WHEAT.

In a large part of our country where wheat is grown, summer fallowing, or the previous preparation of that crop by plowing, harrowing, &c. is indispensable to the success of a crop; and as cultivation is extended and continued, the practice must more widely prevail. The necessity of summer fallows seems to arise at present, from the necessity of the course for cleaning the soil; as owing to imperfect farming, and careless culture, most farms are so overrun with weeds, that unless some thorough measures are taken for their destruction, the crop of grain appears to be considered by them as an intruder, and stands but a poor chance of success. Another benefit is undoubtedly derived from the pulverization and aeration of the soil, which affords the roots of plants a much better opportunity of seeking their food, and receiving those supplies through the medium of atmospheric agency, which are essential to their growth. Now and then, indeed, an individual who manages better than his neighbors; who has guarded against the introduction and spread of weeds, or by skillful culture has eradicated them; who by a proper rotation and manuring, has made his whole farm capable of the production of any crop; and who by draining or deep plowing has given a fineness, dryness and depth, that renders summer fallowing unnecessary, dispenses with this laborious process, and putting in his wheat after corn, peas, or roots, gives these the first benefit of his manures, and finds the crop produced in the place of a fallow, a clear gain. But such farms are rare, and only serve to show what we have a right to expect, when a better and more rational system of treating the soil shall prevail. At present it must be conceded, that in general summer fallows are necessary, and that unless every part of the farm submitted to cropping is occasionally fallowed, it will soon become so foul as to be unfit for the production of grain.

The man who has a clean farm, and on which fallowing is unnecessary, either draws his manure in the fall or spring upon the land he intends to plant, which is generally in meadow or pasture, spreads it, and then skillfully buries it with his plow. On this his corn is planted or his roots sown, which require little labor to keep them clean, but keeps all weeds away, and the soil light and fit for the succeeding crop. The corn is cut in season and removed from the field, when a single thorough plowing with suitable harrowings, is all that is necessary for putting in the wheat; and the same may be said, where on such farms, peas or roots are substituted for the corn crop. Now when it is recollected that but little more labor is required to grow the corn crop than to summer fallow the same ground properly, for unless this process is well and effectually done, it does more hurt than good, only serving the purpose of cultivating weeds it should destroy, the advantages of placing land in such a state as to render a fallow unnecessary, will be apparent to all. Not less than three plowings should be given to a fallow, and these must be increased in number as the condition of the soil demands. There should not at the close, or when the ground is fitted for the seed, be a single green thing in the soil; the repeated plowings will turn up what seeds former growths of weeds may have deposited, and if the successive plowings are judiciously distributed, the young plants or sprouting roots will be destroyed as fast as they appear.

Whatever may be the condition or state of the soil at the outset, calculation should be made to have all the labor done by the first of September, that the seeding may be completed by the middle of that month. An examination of the wheat crop for a succession of years shows that the best crops are produced when the seeding takes place between the fifth and the fifteenth of that month, the plant escaping our two great enemies, the fly and the frost, is better if sown within those periods than at any other. If earlier, the danger is from the fly; if later, from the effects of the winter. The difference between sowing at the proper time, and at too late a one, has received a striking illustration at the north the present year. During the latter part of August, and the fore part of September of last year, we performed a journey of some extent, part of it through some of the finest wheat districts of the state. Very few farmers had sown their wheat, though many had about completed their preparations, when about the fifth of the month that protracted rain set in, which compelled farmers to suspend all their farming operations, and prevented the greater part of the seeding until after the 20th. We have within a few weeks had an opportunity of going over a part of the same ground, and with a few exceptions, the fields sown previous to the rains, are much better than those sown during them, or after they were over. This may be, it is true, partly accounted for by the more unfavorable condition of the soil, owing to the rains, of the latest sowings, but more we think is owing to the lateness of the season when the seed was put in. We are sorry to say that so far as our observation has extended, the present prospect of the wheat crop is any thing but flattering; and it is now too late for any material improvement to take place. In other parts of the country, however, appearances are more favorable, and such is the extent of our territory, and the variety of our soils and climates, that we have little reason to apprehend any great annual variation in the actual quantity of wheat produced within our limits.

SORREL—OXALIC ACID—LIME AN ANTIDOTE.

As our answer to an Inquirer, in a late number of the Cultivator, recommending the use of lime as a remedy for sorrel, which we attributed to a *sour soil*, has elicited some discussion in the agricultural journals, some writers appearing to dissent from our position, we are happy to give place to the following paper from a source entitled to the highest consideration in every thing relating to Agricultural Chemistry. The paper was called out by an appeal to Dr. DANA, through the columns of the N. E. Farmer, in which journal of June 14, it is to be found. The agricultural public are certainly much indebted to Dr. Dana for the readiness, as well as the skill, with which he enters upon all such subjects; thus applying to objects of the greatest practical utility, the vast resources supplied by his chemical knowledge. It is unnecessary to say that he fully sustains the position taken by us, of the value of lime as a neutralizer of acids in the soil, a position controverted by some, and doubted by others. We may add here, as some doubts have been expressed on the subject, and Dr. D. does not advert to the matter, that the acid of sorrel, both wood sorrel and common sorrel, of beech and hemlock leaves, of bistort, rhubarb or pie plant, and several other plants and lichens, is oxalic; and as it has been stated by some writers, that "no acid exists in vegetables except in a state of combination with some alkali," reference may be made to the chick pea of Egypt and the south of France, (*Cicer arietinum*,) in which crystals of uncombined oxalic acid are formed by evaporation.

[*From the New England Farmer.*]

Mr. Darling has stated in his extract from Dr. Kane, and in his own remarks, (see N. E. Farm. May 17,) the well known, long received, and established chemistry of the organic acids of plants, and their transformations. To recall this to mind, I would state the main facts, as chemists understand them, relating to oxalic acid:

1st. Plants form oxalic acid. Almost every, perhaps all, plants contain this acid. The soil seldom contains traces of oxalic acid. Whenever it is there found, it has proceeded from organic decomposition; decaying plants. That plants form this acid, is evident from the fact that some *lichens* grown on naked granitic rocks, contain from 20 to 66 per cent of oxalate of lime.

2d. Oxalic acid does not exist in plants *free*. It is always combined with a base—generally with lime or potash. In sorrel, (including in this both wood and common sheep's sorrel—*oxalis* and *rumex*,) the oxalic acid exists as super oxalate of potash. Each portion of potash is combined with four portions of acid. The salt of sorrel is the *salt of lemons* of the shops.

3d. These bases, lime and potash, are essential to the formation of oxalic acid by plants. The plants never form bases. They are derived from the soil or air. Hence, before the oxalate-forming plant, *sorrel*, can grow, the bases to saturate its acid as it is formed, must freely exist in soil.

4th. Oxalic acid is composed of—carbon, two parts; oxygen, three parts. We cannot, plants probably do not, form oxalic acid by the direct union of its elements. We can, and do, for the arts, transform starch and sugar, by the aid of aquafortis, into oxalic acid. So plants, wonderfully more exquisite in their elaboratory, transform sugar, starch and gum into oxalic acid. If we, in our imitation of nature, require the strongest acid, her delicate hand may effect a similar transformation by the aid of such weak acids as vinegar, and the organic acids found in muck and soil. There is some reason for this belief, when we call to mind the fact, that without any fermentation, sugar is easily transformed by weak vinegar into vinegar. This is a well known process. I go farther: plants transform these weak acids into oxalic acid. This is the great source of that acid. We have only to deprive, as does the plant, vinegar of its hydrogen, and double its oxygen, to convert it into oxalic acid. This is done by the oxalate-forming plant simply by the aid of oxygen only, as we in our process of art, change alcohol to vinegar by a current of air and the aid of a ferment. Life is this ferment in the plant. Oxygen in either case effects all the other change.

To apply these principles to the remarks of "D." it has been shown that lime and potash are essential to the existence of oxalate-forming plants, as sorrel; that weak organic acids are easily transformed into oxalic acid. When, therefore, such acids dissolve, and supply easily the lime and potash to the plant, the acids being in excess, (for we have seen that the salt of sorrel is a super salt,) these oxalates will be formed. In other words, sorrel grows best where free acids and small portions of alkali exist. By applying sour muck, filled with weak organic acids and their bases to soil, we supply it with the food of sorrel. Lime, or potash only, is not this food. Dissolve these bases by weak organic acids, form super salts of them, and you may expect to find, yea, you do find, oxalates produced, sorrel growing.

But it is said that the common chemical doctrine of the agricultural press is wrong. What is that doctrine? *Neutralize the free acids—take the sour out of the soil,* and sorrel grows not. The doctrine is *neutralize.* All hangs on that word. If you only *partially* neutralize, you supply the sorrel with its natural food—an acid salt. You feed it both with its acid in excess, to be converted into oxygen, and the base with which that acid is to combine. You give the sorrel in the same spoon, both its solid and liquid food: these acid salts are the hasty pudding of plants.

But is it possible that "a coat of lime two inches thick," does not neutralize the acids? Yea. Your coat of lime is here *on* the surface. It has been slacked there. During that process, if by air only, it has become an insoluble carbonate: it has not entered the soil. If slacked by water, then a small portion has entered the soil as lime water. This portion *has not neutralized* the small portion of organic acid in that soil. I go farther: its excess has caused the inert vegetable matter to become acid to a greater degree than the lime can saturate. It has formed with it an acid salt. In this salt sorrel finds its food. It pushes up through your two inches of coating. That insoluble carbonate does not effect its growth any more than sand. The small portion of lime added *to*, not *upon*, the soil, having furnished the food for which the sorrel had famished, *that* now springs up, rejoicing that the lime has caused the indifferent vegetable matter to become acid, and to act upon the potash of the soil. Perhaps in these cases, lime is substituted for potash,—an isomorphous substitution.

Lay down your spent ashes, Mr. Editor, in a heap. You know its alkaline power is developed slowly by the action of air upon its silicate of potash. Cart it off now, to top dress your reclaimed meadow. You have left, where your pile was, the very material to partly saturate the organic acids of the soil—perhaps even increased them. You have formed acid salts, by whose absorption oxalate-forming plants, sorrel, will be produced. That this effect may follow an under dose of alkalies, may be understood from what has been advanced. If *all* the acid is *fully* neutralized, then the transformation of the neutral salt is probably not effected—sorrel grows not. If on the other hand, you supply the weak organic acids freely, as by sour muck, these, finding in all soils a small portion of lime and potash, the super salts are formed, and sorrel grows. It will grow till the acids are exhausted.

I consider, then, Mr. Editor, that the common opinion is well founded. I have great reverence for common opinion on such subjects. It is generally based on observation. In this case, it is supported by chemical philosophy. The doctrine of the agricultural press, appears, in the present state of our knowledge, to be the true one. *Neutralize the free acids*—but do this by *soluble* alkalies *in* the soil, not *on* it.

To the last inquiry of "D." I reply, there is no better test of the presence of acid in the soil, than the growth of sorrel or oxalate-forming plants. It is often a better test than the chemist can apply. Unfortunately it is an analyst always ready for the task. Like his brother analysts, he points out the existence of evil, but leaves to others the task of remedy, which the study of his habits teaches.

SAM'L L. DANA.

WHITE DAISY OR OX EYE.

THIS weed is a pest to the farmer, and as we see it is rapidly spreading in all parts of the state, where it has obtained a foothold, we publish for the benefit of those on whose farms it is found, the following extract from an Essay, which obtained the premium offered by the Picton, N. S., Ag. Soc., for the best means of destroying this weed. We cannot omit to urge upon farmers the necessity of paying attention to the first appearance of weeds on their farms, and of eradicating them effectually in the outset. The annual loss to the country from weeds in crops, is immense. We know of many farms where the prevalence of the thistle, steinkrout, johnswort, daisy, &c. &c., is so great as to preclude the hope of a good crop. Any weed is easily overcome on its first appearance; but when it gets firmly rooted and widely spread, as it soon will, if unmolested, it is eradicated with difficulty. We have never been troubled with the daisy, but the system here recommended for their destruction, appears reasonable and worthy of trial.

The writer of the Essay says—"I have had a good deal of experience with the Daisy, (white or ox eye,) and would respectfully offer the following as the most effectual means of eradicating them when they have once got possession. Take a field that is as full of them as it can be; between the fifth and fifteenth of July, take the hay off, and plow it about four or five inches deep with a flat furrow. Let the field lie 12 or 14 days; then cross plow it with a furrow one or two inches deeper, well set on edge. After it has lain four or five days, put on harrows with long sharp teeth, so that they may go down as deep as it has plowed. Let the harrowing be done in angling directions through the field. Then with a hand rake, rake up the roots into small heaps and burn them. After a few days plow it into ridges for sowing. Between the 20th and 30th days of August, sow from three pecks to a bushel of clean timothy seed to the acre; harrow it with a light harrow, and water furrow it. If the land is wet, roll it with a light roller, and if dry, with a heavy one. By these operations, I am satisfied that this and every other weed, as well as the eggs of insects, grasshoppers, &c. are completely destroyed."

INDIAN CORN.

THE great crop of the United States, whether we look at quantity or value, is unquestionably our corn crop. Four hundred and fifty millions of bushels in 1840, and probably 500 millions in 1842, show the importance of this grain to us. And yet the quantity now grown is nothing, a mere drop in the bucket, compared with what we might do, should circumstances render it advisable to increase the production to an extent that might easily be reached on the present cultivated lands of the Union. In order to show at a glance what might be done, we have taken the pains to collect a few instances of good crops that have been grown among us, and would remark that on a very large portion of our soils, in favorable seasons, and with the cultivation corn should receive, crops like the ones named may as well be grown as inferior ones. It is true, we now and then meet with a farmer or writer who asserts that no man ever saw 75 bushels of corn grown on an acre, and that the farmer should be contented with 25; but the only emotions excited by such, are contempt for the ignorant confidence shown, and pity that in this country men should be found so far behind the times.

No. of Acres.	Product pr acre.	Whole Product	Name and place of cultivator.	Year.
1	136	136	R. H. Rose, Silver Lake, Pa.	1820
1	118	118	John Stevens, Hoboken, N. J.	1820
1	172½	172	J. & M. Pratt, Madison, N. Y.	1822
4	170	680	" " " "	1824
1	132	132	Samuel Chidsey, Cayuga, N. Y.	1819
8	112	896	Earl Stimson, Saratoga, N. Y.	1823
5	129	645	Wm. M'Clure, Allegany co. Pa.	1823
5	136	680	Joseph Evans, Washington co. Pa.	1823
1	174	174	B. Bartlett, Eaton, Madison co. N. Y.	1823
1	116	116	T. & H. Little, Newburyport, Mass.	1822
1	115	115	" " " "	1823
1	142	142	Mr. Wilmarth, Taunton, Mass.	1825
5	108	540	Charles Bugbee, Palmer, Mass.	1831
1	140	140	Benj. Butler, Chenango, N. Y.	1831
1-136	....	202	Henry Sprague, Worcester, Mass.	1831
1	103	103	"Old Farmer," Rhode Island.	1833
40	140	5,600	Asahel Renick, Pickaway co. Ohio.	1835
1-12	100	130	S. Lathrop, W. Springfield, Mass.	1835
22	....	2,216	P. Reybold, Newcastle, Delaware.	1835
1	108	108	R. H. Sheldon, Cayuga co. N. Y.	1838
1	110	110	E. Humphreys, Caledonia, N. Y.	1837
40	....	3,800	—— Clark co. Ky.	1837
1	150	150	—— Montreal, Canada.	1838
1	131	131	R. Lamprey, Moultonborough, N. H.	1839
1	116	116	Mr. Brown, Strafford, N. H.	1839
1	130	130	P. P. Pilsbury, Tuftonborough, N. H.	1839
1	144	144	J. F. Osborn, Cayuga co. N. Y.	1841
1	121	121	J. Sherman, " "	1841
1	112	112	" " "	1841
1	120	120	Mr. Ellsworth, Conn.	1840
1	158	158	G. W. Williams, Bourbon co. Ky.	1840
1	120	120	W. Ingalls, Oswego co. N. Y.	1839
7	....	1,352	J. Myers, Canton, Ohio.	1840
1	154	154	W. Ingalls, Oswego co. N. Y.	1840
2	116	232	B. Bradley, Bloomfield, N. Y.	1841
1	122	122	Samuel Phelps, Cayuga, N. Y.	1842
1	113	113	Wm. Ingell, Oswego, N. Y.	1842
1	132	132	W. Wilcox, Saratoga, N. Y.	1842

The number of such crops, where the product exceeded 100 bushels per acre, might be extended to a great length from the list in our possession, but the above is sufficient. Still we imagine some farmers will say, (some have said so,) that the man who puts manure and labor enough on an acre to get 100 bushels of corn, is a loser. We would ask how? A man may cultivate an acre of corn and get 30 bushels an acre, and he will be a loser; but it is scarcely possible when the product is 100. In such a case, all over 50 bushels may be considered profit. In addition to this, his acre of land is placed in a condition to produce more good crops, and the additional amount of these is to be added to the list of profits. The man who has brought 30 acres of land to such a state that it will produce 100 bushels of corn per acre, is far better off than the one who has 100 acres, yielding only 25 bushels per acre; and of this fact we are happy to find many of our farmers are beginning to be well convinced. It is unnecessary to say the remarks we have made respecting corn, are equally applicable to any other grain or grass, and that the grand secret of success is to cultivate no more land than you can make rich.

WHEAT WORM AGAIN.

LAST year, we heard little complaint of the wheat worm in this vicinity, and were induced to hope that its ravages for the present, at least, were stayed. Acting under the influence of a similar opinion, our farmers, who for some four or five years have given little attention to the culture of winter wheat, last year increased their seeding with wheat to a considerable extent; and though the plants suffered much from the severe winter, the appearance of the wheat fields at the 1st of July could not be considered very unfavorable. On the 8th, however, a friend called at our office, and left with us two specimens of growing wheat, taken from different fields near each other, and some five miles from the city, on the Boston railroad. In one specimen, the worm was found in abundance, sufficient to wholly destroy the grain, while the other was perfectly exempt; and according to our informant, the field presented the prospect of a bountiful crop. The cause of this difference is worthy of inquiry, and we hope our intelligent agriculturists will enter anew upon the investigation. The kind of wheat exempt resembles much what is called the Canadian Flint; the injured, the common White Flint. It was too early, however, to pronounce with certainty on the varieties. The worm in this wheat was the same that formerly did so much damage in this region and New-England; but it was neither the weevil of the south, or the grain worm of the west. It is improperly termed a weevil, all this class of insects being *bugs;* while the parent of this worm is a *fly*, as is also that of the grain worm, which caused some alarm in the wheat districts of western New-York, a few years since. The grain worm of the west is also much larger than the worm now under notice, so that it is clearly established that at least three kinds of worms are to be found in wheat; that produced by the weevil, and the two from the fly. We may recur to this subject again.

Since writing the foregoing, we have had a conversation with a gentleman thoroughly versed in agricultural matters, and a resident of Rensselaer county. He assures us that he has been paying much attention to the wheat worm since its appearance the present season, and finds it only in those fields that were sown late; while those sown early, or in August, are, as far as he has observed, wholly exempt. Should further experiment verify this, it would be an important fact. As late sown spring wheat has been found to escape the worm, and early sown winter wheat, it is fair to infer that the period in which the parent fly is active, is very limited, and that the wheat must be in a certain stage to be liable to its attack. We know of but one very serious objection to the practice of sowing winter wheat as early as August: in those districts where the Hessian fly is found, such wheat would hardly escape a fall attack, and in that case, would surely be destroyed by the spring progeny of the fly. We trust, however, that this reappearance of the grain worm will be but temporary, and its disappearance soon be final.

AGRICULTURAL SURVEY OF THE STATE.

We are gratified in being able to give place to the following announcement by Prof. Emmons, that he is at present engaged in an agricultural survey of the State; and we ask the attention of agriculturists and land owners to its contents; as from the brief time allotted him for his labors, a cordial co-operation is requisite to produce the results desired, and which we have a right to expect from such a survey. The great work now in progress on the geology and natural history of New-York, would hardly have been complete without the survey now committed to Dr. Emmons. Such surveys, when properly performed, have always been considered as the most valuable of documents, alike interesting to the farmer and important to the political economist and statesman. They disclose the true source of national prosperity; they teach us the peculiar character and qualities of soils; they inform us of the system of culture and the crops best adapted to any particular location; and they furnish the means of enabling the man who wishes to purchase lands, to do so understandingly. We hope the fact of the survey being in progress will at once be made known; and the editors of newspapers will confer a favor on their readers, by giving the notice a place in their columns.

"To Agriculturists.—Dr. Emmons, who has heretofore been engaged in the geological survey of New-York, is now employed by his Excellency the Governor, under the act of last winter, in making an agricultural survey. He proposes, if possible, visiting each county before the close of the season, for the purpose of making such observations in this department of the survey as shall serve to promote the great object of agriculture. The collection of soils forms a part of his duties. Observations on drainage; the influence of slope and exposure on late and early vegetation; the extent of drift; the distribution of the mineral manures, as peat, marl, limestone, &c., and the extent of the different agricultural divisions or regions, are prominent objects of the survey. To assist in this work, farmers are respectfully solicited to collect specimens of soil, and transmit to Albany, by private conveyance, if possible, for the collection now in progress. Let the specimens thus transmitted, be accompanied with a description of the rock, subsoil, slope, mode of cultivation, &c. &c. and such remarks as are essential to a correct knowledge of their true nature and condition. Agricultural statistics in all the departments of husbandry are respectfully requested, and a communication of facts which may be deemed important to the promotion of husbandry in New-York; also the collection and transmission of those insects which are injurious to vegetation. The soils, when it is important, will receive a chemical examination, as soon as possible after the field work is completed.

"A co-operation in this work is highly important, in consequence of the limited time which has been assigned for it."

To give a fair specimen of soil, it should be derived from different parts of the same field, well mingled, and then a quantity selected for transmission. If possible, it should be virgin soil, or that which has never been manured. We hope the important point of *elevation* will not be overlooked in the survey, as we are confident few things have a more important bearing on agriculture than that.

The New England Farmer.—With the month of July this paper entered upon its 22d vol. It is edited by the Rev. Allen Putnam, a thorough practical as well as scientific farmer, with a taste and judgment certainly not excelled by any of our agricultural journals. Published weekly, 8 pages quarto, at $2,00 a year.

NOTICES OF NEW WORKS, &c.

Prof. Johnston's Lectures.—D. K. Minor, New-York, has just issued the third Part of "Lectures on the Applications of Chemistry and Geology to Agriculture, by Prof. Jas. F. W. Johnston," in a neat 12 mo. of 182 pages. This part consists of five lectures,—I. The Qualities of the Soil may be changed by Art, embracing the connection between the kind of soil and the kind of plants grown upon it—draining and its effects—plowing and subsoiling—deep plowing and trenching—the improvement of the soil by mixing, &c.—II. Improvement of the Soil by Chemical Means, treating of saline manures, their action and effects. III. Of the use of Lime as Manure, its composition, changes, application, action and effects.—IV. Of Organic Manures, treating of the application and effects of green and dry vegetable substances.—V. Of Animal Manures, such as flesh, blood, wool, hair, horn, bones, fish, whale blubber, oil, animal excretions, &c. &c. Mr. Minor has performed a most valuable service for our farmers in giving them this excellent work in a neat form, and at a price which can prevent no one from procuring it—31 cents. It should be in the hands of every farmer who has any desire to understand those operations by which he may sustain and increase the fertility of his lands. We shall recur to it again soon.

Man's Artificial Institutions of Agriculture, tested by God's Institutions of Agriculture.—We find on our table an 18 mo. volume with the above title, from the pen of John D. Wilkins of Louisiana, and the press of G. Vale, New-York. Mingled with much irrelevant matter, are found some very good remarks on the practice of agriculture, and some theoretical fallacies which time and further observation will enable the writer to correct. His notions on the subject of clover are in our opinion eminently just. He contends that it should be matured and partially dry before it is plowed under for manure, and this agrees with our own experience. This plant too, he places at the head of all others as an agent for fertilizing the soil; and yet it is but a few days since we heard a very respectable farmer denouncing clover as one of the greatest curses of the country, and one that did more damage than half a dozen of our worst weeds combined. Mr. Wilkins is right in strenuously recommending deep plowing. It lessens the danger of drouth; it gives a greater range for the roots of plants, and it makes a deeper and more fertile soil. In pointing out some of the instances in which we have deviated from the practice of nature, he says:—"If we would, with the same care, return every thing to our fields, as does nature, we should never wear them out, no more than in natural agriculture;" This truth should be impressed on the mind of every farmer, to return in some form of manure, as much as is taken from the soil; and unless this is done, land is growing poorer as surely as that when two is taken from five, only three remain.

Journal of Agriculture.—The Quarterly Journal of Agriculture, published at Edinburgh, under the auspices of the Highland and Agricultural Society of Scotland, completed its 13th vol. in April last. With the July no., which has just reached us, a new series has been commenced under the title of "*The Journal of Agriculture, and the Transactions of the Highland and Agricultural Society of Scotland.*" It is to be published quarterly in nos. varying from 150 to 200 pages, at 3 shillings, making the cost of it about $3,00 a year. It is a most valuable work, and we should be glad to see it, together with the "*Journal of the Royal Agricultural Society of England,*" which is hereafter to be published in semi-annual parts, varying in price from $1,50 to $2,00 per part, more frequently on the tables and in the libraries of our wealthy farmers.

The Farmer's Herald.—We have before us the first numbers of an agricultural publication, under the above title, issued monthly, in an octavo form of 16 pages, at Chester, and intended for the English farmer. Hitherto the price of the English Ag. Journals has been so high that the common farmer had no access to them; but the success of cheap agricultural publications in this country has been so great, and their utility so manifest, that the present work has been issued to supply a want so injuriously felt. The numbers before us are well filled with useful matter, and will doubtless exercise a most beneficial influence wherever they shall circulate. The price about 75 cents per annum. This must be considered a low rate, when it is remembered that it is a stamped sheet, and the duty is 25 cents a year.

Silliman's Journal.—The July no. of this work, comes to us laden with rich contributions to the science and arts of our country. Among its contents, are papers on the Nomenclature of Zoology, by A. A. Gould, M. D.—on the Tides of the North American Lakes, by Lieut. Ruggles of the U. S. Army—on the Influence of Pressure on the maximum density of liquids, by Prof. L. C. Beck—on the Ice Mountains of Virginia, by C. B. Hayden—Proceedings of the Fourth Session of the Association of American Geologists and Naturalists, held in this city in April last, &c. &c. We regret to learn that by the depression of the times, and the failure of agents, this valuable work is placed in a precarious situation, and we heartily unite in the wish of the Editors, that the friends of science would exert themselves to increase its circulation.

North American Review.—The July no. of this long established work is a capital one, proving that the late transfer of its editorial responsibility, will be attended with no loss to its readers. The leading article is a candid and well written paper on the life and character of Thomas Paine. The one that follows, on the Fisheries, is a most instructive one, and will be read with interest. There are also reviews of Stephen's Yucatan; Northern lakes and Southern invalids; Miss Bremer's novels; the School and the Schoolmaster, the capital work recently published, by Prof. Potter and Mr. Emerson; the Nestorian Christians; Classical Studies; the Mutiny of the Somers, and an ample list of critical notices. D. H. Williams, 6 Water street, Boston, publisher.

FOREIGN INTELLIGENCE.

Mr. Colman.—We are gratified in being able to give our readers a letter received from this gentleman by the last steamer. It will be seen that he enters upon the objects of his tour under the most favorable auspices, and we have reason to believe that every facility will be afforded him, necessary to enable him to make his proposed publication more valuable to American farmers than any work hitherto published on the subject of British husbandry. We hope he will bear in mind the impatience with which it is awaited, and favor us with his first part at the earliest period possible. He must necessarily, however, occupy many months in his examinations and in the collection and arrangement of his materials, before he will be prepared to commence writing his survey; and we can hardly expect the publication of the first part before some time in the ensuing winter. In the mean time, we shall be happy to add the names of any of our friends to his subscription list.

At the meeting of the Council of the Royal Ag. Society, on the 21st June, as we learn from our London papers, Mr. Colman was present, and presented the Society with a model of Atwater's Steam Generator—samples of sugar made from cornstalks—several specimens of flax, prepared by steam, with a view to its being spun on common cotton machinery, and a specimen of perennial flax, from Mr. T. J. Walker, Eckford, Mich.—also various specimens of silk and cotton; upon which, "Mr. Pendarves, M. P., moved a vote of thanks to Mr. Colman for the interesting specimens and details he had brought under the notice of the Council; and having dwelt on the advantages the Society would derive from the information Mr. Colman, as one of their honorary members, would from time to time lay before them during his present visit to England, he would, he trusted, be enabled, after his agricultural tour through the kingdom, and especially after his personal attendance and inspection at the ensuing Derby meeting, to carry back to America a favorable report of the agricultural improvements of the old country." The chairman, Lord Portman, was quite sure that the proposition required no seconding; and the motion being put, the vote of thanks was carried unanimously.

Mr. Colman attended the meeting of the West Sussex Ag. Association on the 16th June, and was introduced by the Duke of Richmond, who said:—"I beg to propose the health of a gentleman from the United States. I have much pleasure in introducing him to the farmers of Sussex as one who was engaged in the inquiry into the agricultural affairs of America. I have seen the report of that inquiry, and know that no one could have written such a work on the subject, unless he had been well aware that agriculture was of the first importance in all countries. I had the pleasure of introducing him as an honorary member of the Royal Agricultural Society; and I now introduce Mr. Colman, who sits by Mr. Dickens, not as a stranger, but as a descendant of those who were one with us, and as a brother citizen. The disputes with America have been happily settled, and let us hope that we may long remain in amicable relations with the United States. I ask you to drink the health of Mr. Colman, with three times three; and then show your response to the sentiments which I have uttered, and may our only rivalry with them be, who can produce the best men and the best farmers." (Loud cheers.)

Mr. Colman, on rising to return thanks, was loudly cheered; and after a brief and pertinent response, which was loudly applauded, gave—"Success to the beneficent landlord, and success to the honest and industrious laborer."

LETTER FROM MR. COLMAN.

London, 3d July, 1843.

Luther Tucker, Esq.:

Dear Sir—I intended sooner to have had this pleasure; but life in London consumes one's time very much as a North River steamer consumes the fuel; and at the close of the day or the week, you can about as well say what has become of it. Such a rushing torrent of human life as the great avenues in this city present—and really, speaking of *great* avenues, one street seems very much like another—it is hardly possible to realize but from actual observation. The Strand, Holborn, Piccadilly, Regent-street, Westminster bridge, London bridge, &c. &c., with their coaches and carts, and barrows and omnibusses, and horses and dogs, and very often droves of sheep and oxen, and people of all nations and costumes, in silks and tatters, in elegance and squalidness, some with clothes on of course, and some I had almost said without any, equally matter of course, I judge, with them; some running, some creeping, some talking, some singing, some crying, some reading, some musing present, indeed, from the top of an omnibus, where you can take in the whole line, one of the most striking and curious scenes imaginable, and infinitely amusing and instructive. It resembles nothing so much as the breaking up of one of our great rivers in the spring, or at the time of a sudden freshet, which sweeps the fields of their ripened crops, when down come cakes of ice of all imaginable shapes, tumbling over each other, and logs and slabs, and broken fences and parts of buildings, and countless other things, mingling in all possible confusion, and all driving with an irresistible impetuosity to the ocean. But there is this difference, that here in the streets of London, crowded as they are, and presenting continually opposing currents and eddies and whirls, there is no confusion or rubbing or chafing, but all get on with good humor and quiet. The omnibus drivers in London seem to me the perfection of "whips," and the very personification of skill and discretion in their particulart art; and though I have rode miles and miles on the box with them, and on some occasions where the street was filled with a continuous string of all sorts of carriages and vehicles, four deep, from the chariot of the peer to the wagon of the coal-heaver and the donkey barrow of the dog-meat seller, I have never seen any entanglement, any running against each other, nor heard a single profane or rude word on any occasion. This certainly speaks well for the people. The law of courtesy and civility reigns supreme among all classes of them; neither by day or evening, and I have been in all parts of the city, have I seen, but in one instance, a single act of quarreling, and that a case of absolute drunkenness and degradation; and not even at Epsom, where I attended the races, and where, it would seem to me, on the day of the great stakes a hundred thousand people were assembled. Undoubtedly there is vice enough in London, and parts of it are, as is to be expected, festering with moral corruption; but these facts speak volumes in the praise of the people, and show the admirable character of their police, and the advantages which come from making manners a study.

You and my agricultural friends in the country will be happy to hear that I have been received here by the distinguished friends of agricultural improvement with the most cordial welcome, and am promised the most ready and ample aid and encouragement to my inquiries. I have already been a good deal in the country, and after this week, leave the vicinity of London for some months. I am not disposed to institute any invidious comparisons between this country and my own, for I see no grounds for such comparisons. However separated in their location, their interests are coincident and the same; and I venture to say that no conviction impresses itself more strongly upon the mind of a wise and humane man, when he comes here, than the *unnaturalness* of enmity or war between two such countries, united as they are by a common origin, a common language, and a universal interest in the maintenance of peace and good will. My mission is regarded with favor, and I shall spare no pains to render it as useful as my limited ability will enable me to do, to my country. Agriculture is pursued here with an intelligence, spirit and liberality which are most remarkable and delightful; much has already been done, and the most valuable results are to be confidently expected. Our country must share in the benefit, and the fire kindled and kept burning so brightly here, must extend its light and heat to both hemispheres.

I shall keep my friends in America advised of my whereabouts and whatabouts; and any letters directed to me at London, care of Baring, Brothers & Co., will be duly received. The steamboat postage, however, must be paid in America, in order to their being sent.

With all good wishes, I am yours, truly and respectfully,
HENRY COLMAN.

COUNT DE GOURCY'S AGRICULTURAL TOUR.

IT is not often the public are favored with a volume of agricultural travels; but we have now before us the recorded observations of a French nobleman, who visited England in 1842, for the purpose of making himself acquainted with their modes of husbandry, and who traversed the kingdom in all directions for this purpose. The Count is evidently a passionate votary of agriculture, a man of talent, and who has made as few mistakes in his observations as could well be expected from a stranger to the country and the language. We should be disposed to quote largely from this Agricultural Tour, were it not that our friend Mr. Colman, with equal or greater facilities for observation, is now employed on the same ground, and that we may expect from him such accounts as will be more useful to us as Americans. We shall therefore only glean such facts as strike us the most forcibly in the perusal, or such subjects as are most frequently the ground of comment among farmers in this country.

One thing that arrests the attention of the American farmer at once, is the rate of expenditure or the capital employed by British farmers. The notices are frequent, in which the payment for manure per acre is from $20 to $30, and the rent per acre from £2 to £8. To meet such expenditures of capital, the crops must be abundant, and the prices high. Such is the case, as is evident from the Tour, and indeed from the concurrent testimony of all other observers. The average of the wheat crop of England per acre has been estimated at 23 bushels; in the United States, the average would range between 12 and 15 bushels per acre. Yields of 50 bushels per acre are as common there as 35 are here; and the produce of barley and oats is in about the same ratio. Climate may have some influence in this great productiveness, but skillful farming more. In a large part of England, the soil on farms constantly cultivated has for many years been increasing in fertility, and the idea of exhaustion of soils, under propercultivation, is scouted as absurd.

Another cause of the greater product of English farms, is to be found, perhaps, in the much greater quantities of seed they use. From 2½ to 3½ bushels of wheat per acre are commonly sown; and the same liberality is observed with other grains, and with grass seeds. It is evident that such seeding would be useless, except on lands very rich, and prepared in the best manner. In seeding to grass, the English farmer goes on the maxim that where grass does not grow, weeds will, and his object is to occupy the ground fully with the former. Thus the Tour states that Mr. Bates, the celebrated breeder, in stocking his meadows or pastures, "sows 5 lbs. of cow grass, 5 lbs. white clover, and half a bushel of rye grass per acre; or if alone, 2 lbs. of hop clover and 12 lbs. of red clover per acre."

One of the most interesting visits made by the Count, was to the farm of Mr. Fisher Hobbs, a young man educated to the business of farming, and who the year previous received no less than 41 premiums from various agricultural societies. He states that good farmers in Leicestershire or Suffolk, who receive pupils, receive from them annually from $400 to $500. Mr. Hobbs used to breed Short Horned cattle, but he has changed them for Herefords, believing the latter better adapted to that neighborhood. He thinks they fatten more readily than the others, but the Short Horned are superior for milk. All his farm arrangements and implements were of the most superior kind, and the best wheat seen in England was on his farm.

One of the most extensive breeders of Short Horns in England is Earl Spencer, formerly Lord Althorp, and no one has taken more pains to preserve the purity of the breed, or improve it, than he. His herd numbers 380, and a pedigree of the whole is kept with the greatest care. He has never sold any cows, not having as yet got the number of the same stock he wishes to keep. Bulls and cows that do not breed, are the animals sold from this herd. He sold a cow that did not breed to a farmer, who, though aware of the fact, gave £30 for her, and she afterwards produced several most valuable calves. Change of situation and less nourishing food was considered the cause, and Earl Spencer has profited by the hint, where cows have been indisposed to breed. The calves have milk for the first three months; afterwards, skim milk, with barley or oatmeal. In breeding cattle or sheep, Earl Spencer does not reject an animal because it has one great defect, provided it has other important qualities, but such a one must be bred to an animal that possesses the quality in which it fails in the highest degree possible. A descent of five generations from an animal of merit is deemed by him a good pedigree.

At Ferraby, he called on that excellent farmer and breeder, Mr. Watson; examined his beautiful Short Horns and Leicesters, and his system of farming generally. Mr. W. gives no hay to his horses, but feeds them on oats in the straw, cut into chaff. When under hard work, a small quantity of ground oats or barley is given in addition. He works oxen extensively, preferring for this purpose the Devons. He sows from 100 to 200 acres of turneps each year, each acre being manured with 12 bushels of bones and from 17 to 20 bushels of ashes, mixed with night soil. On land intended for wheat, he lays and spreads the dung two or three months before breaking it up. His wheat averages him about 30 bushels, and his barley about 40 bushels per acre. The soil is good, but much of it is not more than six inches deep, on limestone or chalk.

At North Allerton, he attended the meeting of the Yorkshire Agricultural Society, one of the best institutions in England; Lord Spencer presided. The dinner was laid for 1700. "The toasts, given with three times three, according to the English fashion, occupied a long time, and were very tiresome; the greater number of the speeches were long, and contained nothing but compliments, ill timed." We can readily credit this assertion of the Count, for in reading the reports of the speeches given at similar meetings, in the English journals, we have often been reminded of the saying, that "when the wine was in, the wit was out." The show of animals was fine.

The Short Horn stock of Mr. Bates of Kirkleavington, a name better known to our breeders than any other, excited his unqualified admiration. The Count gives an interesting account of the manner in which Mr. Bates has drained and reclaimed his farm, which consists of 1,000 acres of heavy, wet, clay land. His land, so drained, produces excellent crops, particularly of hay and pasture. His meadow he manures every third year with fifteen tons of rotten manure per acre, and the same quantity every sixth year is given to his pasture land. The manure is put on the meadows as soon as the hay comes off, in moist weather, and is brushed into the land with a heavy drag, made of thorns. Mr. B. keeps all his cattle in the house in winter, and his bull calves all the year round, experience teaching him this is much the best course. He asserts that one acre of clover, cut green for animals, will feed three times the number that it would if pastured. Of the farm of Mr. B., 600 acres are divided into twelve rotations of 50 acres each. First year, fallow; second, wheat; third, clover and rye grass; fourth, fallow; fifth, wheat; sixth, beans; seventh, fallow; eighth, wheat; ninth and tenth, grass; eleventh, oats; twelfth, beans.

At Mr. Jobson's, near Chillingham, he found beautiful cattle and fine crops. Mr. J. gives his married laborers a house, a small garden, a portion of land prepared and manured for potatoes, 28 bushels of oats, 20 bushels barley, 7 bushels of peas and beans, 3 bushels of wheat, pasturage for a cow, 23 cwt. of hay, and as much as he requires of straw and turneps, in lieu of hay, and £4 in money. Every married laborer is obliged to find a bond servant to work during his service, to whom Mr. Jobson pays ten pence per day, and in harvest a shilling. It is unnecessary to say that the wife is not unfrequently the bond servant of the contract. At Chillingham park he saw the celebrated herd of wild cattle which have occupied it for centuries. They are all white, and more wild than the deer. Of the cattle there are 130, of the deer about 500. The system of farming adopted by the Messrs. Jobson is very complete, and here the Count found a beautiful bull from Mr. Bates' stock. The manner in which capital is employed in farming is well illustrated in the case of Mr. Hoggart, near Coldstream in Scotland. Mr. H. is a young man, and took his farm for only 15 years. He expended at once, $20,000 in draining, embanking, ditching, liming, &c., and employs a capital of $25,000 in carrying on the farm, stock, &c. The first five years he makes nothing; the second five years he receives a return of his expenditures, and will net $25,000 on the third five years. It is nothing uncommon where the lease is for only 20 years, to expend from 5 to 15,000 dollars in draining.

At Maybol, in Scotland, he visited the farm of Mr. Fandley, which he found in fine condition. Wheat averaged 38 bushels, and the oats 60 per acre. He keeps from 34 to 36 fine Ayrshire cows. Many yield 35 quarts, and some have reached 45 quarts per day during the best of the season. Mr. F. makes about 200 lbs. of butter per week. In seeding his lands to grass, he sows 12 lbs. of red clover, 8 of white, 4 of hop clover, and 70 lbs. of English rye grass, per acre. The herbage from such a quantity of seeds, is from the first of the best kind.

He visited the establishment of Mr. Smith at Deanston, whose factories and farms are all on a magnificent scale, and managed with equal success. Mr. Smith is the inventor of many valuable agricultural implements, such as Wilkie's turn-wrest plow, and he first constructed a plow for the purpose of subsoiling. In subsoiling, Mr. Smith cuts a furrow six inches deep and nine inches wide, followed by another plow, which only stirs, without bringing the subsoil to the surface. In the dairy, flat round pans of zinc are used. The cows are Ayrshire. One of his large manufactories, some eighty feet in height, is roofed with bitumen, on which earth to the depth of a foot is placed, and thus converted into a garden. The Messrs. Drummond of Sterling, have one of the most extensive agricultural museums, containing all kinds of farming implements, seeds, &c. &c. to be found in Europe. The establishment is admirably managed, and has effected vast good in improving agriculture in almost every district of Scotland. The extensive plantations of larch, fir, pine and oak of the Duke of Athol, attracted his notice. The late Duke planted 100 acres annually, for 60 years, and before his death had sold timber to the amount of $150,000.

On the form of Mr. Watson at Keylor, in the north of Scotland, he saw very much to admire. This gentleman feeds large numbers of South Downs and Leicesters, and has many cattle. He keeps about 20 of the mountain or highland cows, which he breeds to a Short Horn bull, and it is astonishing to witness the results of this cross of a large male with small females. The success in every respect is beyond a doubt. Mr. W. sows little wheat, as it does not ripen well. Grain of all kinds is reaped by the sheaf, three pence for two dozen, and a guage is used to determine the size of the sheaves. The grain when cut is bound and set up, two rows of five each, capped with two others, making the dozen. Such is the weather in this part of Scotland, that the grain is not fit to stack in a number of days, and last year the reaping was not all done before December. The mean produce of barley and oats, which are the most grown, is about 38 bushels. Mr. Watson takes pupils to instruct in farming. Two young men of good family were with him, who pay 300 guineas for the first year, and 200 the following years. His terms are high, to prevent too many applicants.

We cannot follow the Count in his travels farther; as we have given enough to show how English agriculture strikes a foreigner; and as we hope to have the privilege hereafter of detailing the progress of an American farmer over the same country.

MULTICOLE RYE.—This is the name given to a plant, a native of Poland, which has been introduced into cultivation with great success in the south of France, and of which the following account is given in the London Farm. Magazine:—"It grows on common soil suited to the old fashioned rye, but its habits are totally different. By the reports of above thirty respectable agriculturists near L'Orient, who have cultivated it for the past two years, it does best when sown the 1st of June. Its growth is most rapid. Two crops of it are before July cut for hay, and by the 15th of August, a grain crop is reaped. The straw is from 8 to 10 feet high, and the ear from 10 to 18 inches long. An account of this rye may be found in the "Transactions" published by the French Minister of Agriculture, &c." Would not this variety of spring rye be worthy of trial in those parts of our country where other grasses are difficult of growth, on soils rather sandy and light, but which if in good condition, are the best for this grain. The growth, if correctly stated, is truly surprising.

TRIP TO SYRACUSE.

The Mohawk Valley—Lunatic Asylum—Manufacture of Parchment at Utica—Syracuse and its vicinity—Prevalence of Weeds.

EVERY BODY travels. The facilities of locomotion are so great, the inducements to travel so strong, and the means of gratifying the passion of seeing so easily procured, that few are contented to spend all their time under the dull monotony of home or eating cares of business, but occasionally escape from them to the free air of our mountains and valleys, to return with renewed health and spirits to the daily occupations of life. We too have been rambling; and the ground chosen was the beautiful valley of the Mohawk, and the fertile fields of Western New-York. It may well be questioned whether any other route of frequented travel in this country offers more to interest, instruct or please, than the Mohawk valley. Its round wooded hills; its massive precipitous rocks and wild gorges; the rolling waters, long glittering reaches, and willow covered islands of the river; the impressive historical recollections connected with almost every part of the region; and to the farmer, with whose eyes we viewed it, of more real consequence than all, its rich and broad flats, sloping pastures and cultivated fields constitute a picture of beauty and richness rarely equaled.

No man traverses the Mohawk valley without feeling that God has lavished upon it the gifts that best fit a country for the residence of man; and if he sees, as he too often does, things that do not harmonize with this feeling, he is convinced that it is to be traced to the improvidence or the neglect of man. Where weeds grow in rank luxuriance, crops of grain of equal vigor might be produced; nothing but the care and the labor of man is requisite to secure this result. Feeling thus, it is impossible to offer any reasonable excuse for the various weeds that are so rapidly multiplying on the fertile soils of the Mohawk, and we are confident fast reducing the profits of the farmer. It does no good for a farmer to yawn, fold up his arms, and say weeds cannot be conquered. It is not true: they can be; and numerous facts prove this to be the case. There is not a weed, now encroaching on the soil and the profits of the farmer, but can by persevering effort be eradicated, and by care and vigilance prevented from ever again appearing to any extent. The johnswort, thistle, daisy, elder, cicuta, wild mustard,&c. &c., are not immortal, but are continued by seeds or propagation from the roots. Strike at their existence, at the point most vulnerable; if their mode of propagation is from seeds, sow none; if from roots, or from both seeds and roots, then dig or plow the roots till killed. If we were to classify the weeds of the Mohawk farms, according to the injury they must occasion, the mustard or charlock would be placed at the head, and the elder next. Both delight in precisely such soils as there exist, rich, friable, and not liable to drouth. It was deplorable to see how the spring sown crops were overrun by the mustard; whole fields of the brightest yellow, and the poor oats or barley maintaining a dubious struggle for ascendancy, if not for existence. Now and then the heart was gladdened by a farm from which skillful cultivation had mostly kept these pests, and the richness of the growing crops attested what such soils would do when properly cared for.

Strange as it may seem to those who remember the time when the Mohawk valley was considered the finest wheat country in the United States, there is now but very little wheat grown in that district. A traveler will see more wheat on the ground, in four or five miles ride in Onondaga and the western counties, than in the whole Mohawk valley from Schenectady to Rome. From thence, through Madison, there is a perceptible increase, and in Onondaga an Cayuga it is grown in great quantitics. Throughout this extent, or indeed through the whole west, lands lying on, or in the vicinity of the limestone strata, are found to be the most productive of wheat, a fact which examination will easily show. It is worthy of serious consideration with the farmers of the wheat producing districts, whether their lands too will not soon fail them like those of the Mohawk, and they be obliged to rely on other sources of profit for thrift, if not for bread. There is, we think, clear indications that such will be the fact; that western New-York will soon cease to produce wheat to the present extent, and stand in relation to Michigan, Wiskonsan, &c. as the Mohawk valley now does to her. That there is no necessity for this exhaustion of soils; that they may always be made productive of grain, is evident from the continued fertility of soils in Europe, that have been cropped for hundreds if not thousands of years. It would be well for them to inquire the cause and the progress of this exhaustion, and endeavor to avoid such a disastrous result.

It has been an opinion to some extent, that a different kind of soil was required for corn and the spring grains, than the one best adapted for wheat; It is certain that corn and the spring grains will frequently succeed where winter wheat will not; but in our excursion we found the best corn, and the best spring sown grain, on those farms where the best wheat was growing; a fact which proves that these farms were better cultivated, or that the best wheat lands were also the best for other farming purposes. Corn was every where backward, but the very warm weather of the middle of July, was bringing up leeway rapidly. It is to be hoped there will be no failure of this crop, for there is none that contributes more widely to the sustenance of both man and beast.

During a few hours spent at Utica, one of the most pleasant and prosperous places on the canal, a visit was made to that splendid proof of the state's consideration for the most unfortunate class of her citizens, the Lunatic Asylum. One side of the square only, a massive stone building of about 500 feet in length, is completed; the others are in various degrees of forwardness. The number of inmates was at that time 130. Some were laboring in the grounds belonging to the asylum, some were walking up and down their rooms in moody melancholy, and a few were raving mad. It was a pitiful sight to see these wrecks of humanity; and it was a saddening and humiliating reflection, that the slightest injury, the mere loosening of a screw as it were, in the complicated mechanism of man, might reduce the proudest intellect to a similar ruin. An insane man is said by his language to show what the prevailing current of his thoughts were, while moving in society and among his fellow creatures. This is not improbable; for the conduct of the insane reminded me of a school in which the master is absent, and expressions were used and words uttered, which would not have been, had reason, the master, been present. The conduct of no inconsiderable part of the insane, goes to prove the truth of Talleyrand's maxim, "that language was given to man, only to conceal his thoughts."

There are many branches of manufactures carried on to a considerable extent in Utica and its vicinity, furnishing employment to many operatives, and opening to that extent, a market for farmers that would not otherwise exist. Among these manufactures is one of parchment, where large quantities are annually produced, and of the best quality. A specimen from this manufactory received the premium at the State Fair at Albany, last October. An anecdote related to me by the proprietor, J. C. Delong, Esq. will show to what perfection the article has arrived. Considerable quantities are used in the departments at Washington, and has generally been imported, a good article being rarely found in this country. To exhibit his own, and call the attention of the officers of the Government to the manufacture, he addressed a letter on a sheet of it to the head of the War department, saying that the sheet sent was a fair specimen of the parchment manufactured by him, and inviting an examination. Supposing the letter to be only an envelop of the specimen, he made some inquiry for the article itself, which he supposed had been mislaid, and among others spoke to Mr. Ellsworth of the patent office, showing him the letter at the same time. "Sir," said Mr. E., returning the letter, "that letter is the specimen spoken of." "You do not mean to say," answered the Secretary, "that this letter is parchment?" "Certainly sir, the letter is the parchment referred to, and to convince yourself, you have only to attempt tearing it." It was so, and the Secretary was surprised to find that American manufacturers could produce parchment equal in appearance to the very best kinds of writing paper.

Syracuse is a place that possesses many advantages. The center of the New-York salines; the point where various lines of communication from the south and the north, from Erie, Ontario, and the Hudson meet; in the heart of one of the best farming counties in the state; and possessing water power to a considerable extent; it is not surprising that the place should be prosperous. The great number of new buildings going up, and the crowded state of the principal thoroughfares, are very sure indications of a healthier and better condition of things than has existed for some years. There are few manufactures more important to the country at large than that of salt, or one in which the agricultural part of the country is so deeply interested. An article necessary to the health, and indispensable to the comfort of both man and animals, salt must always hold a high place among our articles of consumption. The act of the last session appears to be nearly every thing that could be desired, and the activity of the manufacturers shows that a large quantity of salt will be produced the present season. The fertility of the soils in the vicinity of Syracuse is of the highest order, and farms are proportionably prized. It may be considered a curious and instructive fact, that the district of country proved to be the most valuable in this county, for many years after the settlement was considered almost valueless, and only to be occupied by the poor or the unfortunate. It is a remark of which the experience of many years has verified the truth, that a knowledge of the state of the crops of wheat or corn on a line across the center of the county, from Dewitt to Ellbridge, would enable one to form a very correct estimate of the condition of these generally in the state; as in no case has the general average been found to exceed that indicated by this particular section. But Onondaga, like the eastern counties noticed, shows that more attention has been paid to taking of crops with little labor, than to keeping the lands clean, and in an improving state. In the wheat lands, the steenkrout or red root, one of the worst enemies of that grain, has a wide spread, and like the charlock or mustard of the Mohawk, threatens ere long to have undisputed possession of many farms. Farmers cannot be aware of the serious loss they suffer from the presence of this and similar weeds in their crops, or they would make more energetic and consistent efforts to destroy them. A severe drouth was prevailing here, and greatly lessening the prospect of root crops generally; still an early recurrence of rain would give these crops a fair chance of success.

But these rambling remarks must be here closed; and it is done under the increased appreciation of the value of agriculture to the country, the beneficial effects of a farm residence on the health and spirits, and the assurance that the most profitable farms are those managed the most neatly and skillfully.

NEW-YORK STATE AG. SOCIETY.

THE regular meeting of the Executive Committee of the N. Y. S. Ag. Society for July, was held at Rochester, on the 12th. Present, Mr. WADSWORTH, President; Messrs. SHERWOOD and LANGWORTHY, Vice Presidents; Mr. TUCKER, Sec'y, and Messrs. WALSH of Lansingburgh, and HILLHOUSE of Albany, members of the Board. There were also present, the President and several of the officers of the Monroe Co. Ag. Society, together with a number of citizens of Rochester, who took part in the deliberations of the Committee, and evinced a warm interest in behalf of the efforts of the Society.

Propositions were made to alter the time of holding the Fair to an earlier day than had been fixed upon, and to alter the Premium List so as to give separate prizes to the different breeds of Short Horn, Hereford and Devon Cattle. Both propositions were, however, after full discussion, rejected.

The Committee, after viewing the different locations offered for holding the Society's Cattle Show and Fair, which is to be held on the 19th, 20th and 21st days of September next, selected a beautiful spot on the west side of State street, about a mile north of the center of the city of Rochester. The ground is elevated and dry, with a close heavy turf, and is admirably located for the purpose, being on one of the principal avenues, with a macadamised road and sidewalks extending to it.

The question of enclosing the grounds, and charging the small sum of 12½ cents for admission, as practiced at the last Fair in Albany, was discussed, when it was unanimously

Resolved, That a committee of arrangements be appointed, whose duty it shall be to prepare the show grounds for the exhibition, by causing eight or ten acres, as they may think best, to be enclosed with a high and substantial fence—to erect such building or buildings as they may deem necessary—procure tents, build pens, &c. and that to defray the expenses thus incurred, a fee of 12½ cents be charged for admission.

The following gentlemen were appointed for the purpose specified in the above resolution:

Committee of Arrangements.—J. S. Wadsworth, Esq., Col. A. Sawyer, L. B. Langworthy, Lemuel Thompson, Gen. R. Harmon, C. F. Crosman, P. Barry.

The following gentlemen were appointed Judges to award the premiums to be paid at the Fair:

On Bulls, Classes I, II, III, IV.—James Gowen, Philadelphia, Pa.; William Garbutt, Wheatland; C. N. Bement, Albany; Wm. Fuller, Skaneateles; Z. A. Leland, Bath.

On Cows, &c. Classes V, VI, VII, VIII.—Adam Fergusson, Watertown, U. C.; Henry Whitney, New Haven, Conn.; H. D. Grove, Hoosick; G. V. Sackett, Seneca Falls; Edward A. Le Roy, Avon.

On Cows, &c. Classes IX, X, XI.—L. C. Ball, Hoosick; Thos. Weddle, Rochester; Lyman Hibbard, Homer; John Ayrault, Perrinton; Elijah W. Sheldon, Sennet.

On Cows, &c. Classes XII, XIII, XIV.—Daniel H. Fitzhugh, Mt. Morris; Wm. Parsons, Lockport; Jno. Webster, Hamburgh; Abel Baldwin, Clarkson; Lee Comstock, Le Roy.

On Working Oxen and Steers—Wm. A. S. North, Schenectady; Israel Boies, Homer; Obadiah Hoag, Lockport; C. A. Godfrey, Geneva; E. Marks, Navarino.

On Fat Cattle and Fat Sheep.—P. N. Rust, Syracuse; Allen Frost, Rochester; J. C. Mather, Schaghticoke; Holloway Long, York; William Otley, Phelps.

On Stallions and Matched Horses.—Francis Rotch, Butternutts; Allen Ayrault, Geneseo; F. F. Backus, Rochester; Samuel Greenleaf, Canandaigua; J. R. Speed, Caroline.

On Mares and Colts—W. T. Porter, New-York; D. D. Campbell, Schenectady; Abram Vought, Mendon; Joseph Christopher, Rochester; Dan Hibbard, Cortlandville.

On Swine.—T. C. Peters, Darien; E. Wolcott, Rochester; Ezra Cornell, Ithaca; O. F. Marshall, Wheeler; Wm. Salisbury, Leeds.

On Sheep, Classes I, II.—R. L. Allen, Buffalo; S. E. Hudson, Palmyra; F. M. Rotch, Butternutts; Ira S. Hitchcock, Oneida Castle; Jared Colman, Rochester.

On Sheep, Class III.—J. P. Beekman, Kinderhook; William Randall, Cortlandville; L. A. Morrell, Lake Ridge; R. Harmon, jr., Wheatland; R. C. Nicholas, Geneva.

On Plows.—Geo. W. Patterson, Westfield; Myron Adams, East Bloomfield; C. C. Dennis, Auburn; John Moxon, Charlotte; C. S. Button, Newark.

On other Agricultural Implements.—L. B. Langworthy, Rochester; J. C. Langdon, Troy; Geo. C. Latta, Charlotte; T. D. Burrall, Geneva; C. F. Crosman, Rochester.

Plowing Match.—J. B. Nott, Guilderland; Theron Brown, Wheatland; E. A. Howland, Ledyard; William Gorham, Canandaigua; Jno. H. Robinson, Henrietta.

On Butter and Cheese.—Rob't Deniston, Salisbury Mills; B. P. Johnson, Rome; Laurens Hull, Angelica; Dr. T. Goodsell, Utica; Z. Barton Stout, Richmond.

On Maple and Cornstalk Sugar.—John Greig, Canandaigua; H. S. Randall, Cortlandville; Thomas Hillhouse, Albany; A. B. Dunlap, Ovid; John Vernon, Mt. Morris.

On Silk.—Orville Hungerford, Watertown; Henry Polhemus, Auburn; T. Mellen, Madison; William Kidd, Rochester; Robert Rose, Richmond.

On Domestic Manufactures.—Samuel Cheever, Albany; Lewis Brooks, Rochester; Geo. Byington, do.; M. W. Soper, Batavia; J. B. Dill, Auburn.

On Vegetables.—Abner Bryant, Buffalo; Lemuel Thompson, Rochester; William Blossom, Canandaigua; Asa Rowe, Sweden; Dr. Beaumont, Lyons.

On Fruits.—J. J. Thomas, Macedon; John R. Murray, Mount Morris; Benjamin Hodge, Buffalo; N. Goodsell, Rochester; Dr. Doty, Montezuma.

On Flowers.—Alexander Walsh, Lansingburgh; P. Barry, Rochester: M. B. Bateham, do.; S. E. Warren, Troy; James H. Watts, Rochester.

On Discretionary Premiums.—J. B. Duane, Schenectady; Jno. J. Viele, Lansingburgh; Harvey Baldwin, Syracuse, J. McDonald McIntyre, Albany; G. I. Pumpelly, Owego.

PREMIUM ON STEERS.—The following were added to the Premium List:

Three Year old Steers

Best pair, ... $10 | Second best, ... $5

Third best, vol. of Transactions.

Two Year old Steers.

Best pair, ... $8 | Second best, ... $4

Third best, vol. of Transactions.

M. B. BATEHAM, Esq. Rochester, was appointed Assistant Secretary for the Fair.

J. M. Sherwood, Esq., was appointed a committee to make arrangements with the several Railroad Companies for the transportation of stock to and from the Fair.

Hon. Isaac Hills, Dr. Alex. Kelsey, and Gen. J. Gould of Rochester; Hon. C. H. Carroll of Livingston, and Luther Tucker of Albany, were appointed a committee on invitation and reception of strangers.

The Executive Committee adopted the following

REGULATIONS FOR THE FAIR.

The premiums for Essays and for Agricultural Implements, will be open to the United States; but all others will be confined to residents of this state, who are members of this Society, or who may become so by the payment of one dollar on entering their articles, and to the members of the Monroe Co. Ag. Society, who shall have paid their membership for the present year.

All persons who intend to exhibit cattle, horses, sheep or swine, should give notice to M. B. Bateham, Assistant Secretary, Rochester, or to Luther Tucker, Albany, previous to the 10th of September, in order that the necessary accommodations may be made for them; and all animals must be on the ground by 9 o'clock of the 20th.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c., should have their specimens on the ground on the 19th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on Dairy Cows, Fat Cattle and Fat Sheep, Butter and Cheese, Field Crops, Maple Sugar, &c.

The statements required from those who compete for field crops, must be sent to Luther Tucker, Rec. Secretary, Albany, previous to the 1st of January, 1844, and the premiums will be awarded at the annual meeting of the Society, on the third Wednesday of January.

Competitors for the premiums on Essays must forward their manuscripts to the Recording Secretary, Albany, previous to the 1st of January, 1844, free of postage.

No Premium will be awarded, unless, in the opinion of the Judges of the Class in which it is offered, the animal or article is worthy of such premium.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes; but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

All premiums will be paid in cash or plate, at the option of the winners.

SALT AS A REMEDY FOR THE CUT WORM.

We give the following, from a letter from F. J. Betts, Esq., the President of the Orange Co. Ag. Society. The use of salt seems to have proved an entire protection to his plants for two years in succession. This fact, if our readers will remember and act upon it, may save them enough to pay for the Cultivator for several years.

"I am making some very careful and accurate tests of the effect of various saline manures upon *maize*, this year, the results of which I will communicate to you in due season.

"A good deal has been said in the agricultural papers about the effect of common salt as a manure, and also as a remedy for the cut worm. I used it last year, as you will probably remember, sown broadcast, at the rate of two bushels per acre, and my field escaped the ravages of the worm entirely, although my immediate neighbors were all complaining of its being uncommonly destructive. Last fall, I was planting fruit trees in the field which I have this year appropriated to Indian corn, and I found the soil literally filled with the cut worm. I again sowed salt in the same quantity as last year, immediately before plowing the ground this spring, and I have not lost a single plant from its ravages, and I believe therefore, that there is no doubt that salt is a certain remedy for that pest of the agriculturist."

SPOKEN FOR.

Decidedly the best thing we have seen the present season in the way of illustration, is a cut accompanying a communication in the June No. of the Farmer's and Mechanic's Journal, published at Chagrin Falls, Ohio. It is not the beauty of the engraving that strikes one, but the truth, we had almost said sad truthfulness of the cut, that will fix the attention of all farmers who may meet with it. The man who drew that, had an eye for nature, and the past season furnished but too many similar subjects for the pencil of an amateur. The cut represents a sheep—she looks as though she might be the last of a flock— endeavoring to shelter herself behind a broken and dilapidated fence from the piercing blasts of March. Her wool has fallen off in large patches on her rump, sides, back and neck; her shrunken form speaks of lack of hay and want of turneps; and every thing indicates a sheep that had seen better days, but had now reached the lowest depth of poverty. Two or three crows are seated on the fence near her, apparently deliberating whether they should commence picking her ribs now, or wait a few hours longer for the scanty meal she would furnish; while others are seen on the wing, hastening to join the consultation or the feast. The whole is worthy of Hogarth himself, and would have made a capital close to "The Poor Farmer's Progress," had his inventive genius chosen that field for its exercise.

DICTIONARY OF TERMS USED IN
Agriculture and its kindred Sciences.

MEAT.—The flesh of animals is composed of azote, carbon, oxygen, and hydrogen, combined in various proportions, so as to constitute fibrin, albumen, gelatin, and ozmazome; and it is on these substances that the value of meat for the purpose of nutrition depends. *Fibrin* constitutes the greater part of the muscular fibre, and no small part of the blood of animals. *Albumen* occurs in animal substances in two forms, fluid and solid. The white of an egg is an example of the first form, and cartilage, hair, nails and horn, of the second. *Gelatin* abounds in animal substances, and is most abundant in those that are young. It is found in the bones, ligaments, tendons, skin, muscles, and more sparingly in the other parts of animals. Gelatin forms a tremulous or solid jelly, is highly nutritive, but its digestibility has been overrated. *Ozmazome* is the principle to which meat owes its taste and odor when cooked. White meats, such as veal and chicken, contain little of this substance, but it abounds in the red fibrin or muscle, such as constitutes beef and mutton. Wild animals, such as the hare or partridge, squirrel or venison, have more ozmazome than the tame ones, and their flesh is more highly esteemed. The value of meat is much depending on the manner in which it is cooked. Prof. Wallace of Edinburgh, instituted a series of experiments to ascertain the loss by the different modes of cooking, and allowance made for the bones; the following was part of the results:

100	lbs. of beef, lost in boiling,	26½ lbs.
100	" " " in roasting,	32 "
100	" " " in baking,	30 "
100	" of legs of mutton, averaging about 9½ lbs. each, lost in boiling,	21½ "
100	" of loins of mutton, averaging 8¾ lbs. each, lost in roasting,	35½ "
100	" necks of mutton, averaging 10 lbs. each, lost in roasting,	32⅓ "
100	" shoulders of mutton, averaging 10 lbs. each, lost in roasting,	31½ "

It is clear from these experiments, that less weight is lost by boiling than roasting, and the average loss of meat in cooking may be stated at about 28 per cent. Meat boiled violently for a long time loses more of its weight, and is not as good as when gently boiled a shorter time. In the first case, the albuminous part is so much overdone as to be worthless, and the gelatinous, instead of being fully softened, which is all that is required, is dissolved and lost in the water by boiling. For broth, meat containing the most ozmazome is to be preferred, such meat rendering the fluid more nourishing and savory.

MILCH COWS.—The value of milch cows is depending on several circumstances, such as the quantity of milk produced, the butter it will make, the time of going dry, and the gentleness of disposition, ease of milking, &c. It is not always the smoothest and handsomest cows that are the best milkers; on the contrary, a disposition to take on fat is rarely found combined with great milking qualities. In England, the Ayrshires are great favorites as milkers; but there, as here, occasional instances in all breeds are found where large quantities of milk are produced. In this country, considerable discussion has taken place as to the respective milking qualities of the Short Horns and the native breeds, and an ample list of the best that could be selected on both sides, with the quantities of butter and milk produced, may be found in Mr. Colman's 4th Report on the Agriculture of Massachusetts. We select a few of both kinds, to show the immense difference there is in profit, between keeping good cows and poor ones.

Cow Belina,	S. H., Mr Powell,	butter per w'k,	20½
Blossom,	S. H., Mr. Canby,	" "	17¼
Oakes cow,	N. B., Mr. Quincy,	" "	19¼
Nourse cow,	N. B., Mr. Nourse,	" "	20
Springfield,	N. B., Mr. Henshaw,	" "	21

And any number of the common native breed may be produced that will yield from 12 to 15 lbs. per week. The amount of milk that some cows will give is truly astonishing. As an example, we give the product of the celebrated Cramp cow of Lewes, in England, premising that some of the instances furnished by Mr. C. fall but little below.

Year.	Time milked.	No. of quarts.	lbs. of Butter.
1805	48 weeks.	4921	540
1806	45 "	4137	450
1807	51 "	5782	675

MILDEW.—This is a disease which attacks both living and dead vegetable matter; and causes the farmer most serious losses by producing blight in his crops. It is generally attributed to meteoric agency, such as dew, fogs, showers, &c., but is in reality caused by minute fungi, or parasitical plants. How far atmospheric changes may predispose plants to the attacks of these fungi, is a question worthy of investigation. Some of these fungi attack plants internally and some externally. Of the first of these is the *Uredo fœtida*, which causes the smutty kernel in wheat. It attacks and fills the young seed with myriads of its stinking deep brown spores, which end in filling and rendering worthless the whole grain. *Puccinia graminum*, the common mildew or blight of wheat, is generated in cavities below the epidermis or skin of the plant, and protrudes when ripe, in the form of dark grey broken striæ or lines. *Æcidium cancellatum* is the blight on pear trees, and appears in bright yellow spots upon the upper surface of the leaves. What is called the *fire blight* in the pear tree, is the work of an insect. The orange red mildew of the Barberry, is *Æcidium berberidis*. *Sclerotium compactum*, occasionally establishes itself on the rind of fruits, rendering them uneatable; one of the varieties of the *Sclerotium* is supposed to produce the *bitter rot*, one of the worst diseases of the apple. Of the fungi that attack the exterior of plants, the following are some of the most common. *Erysiphe communis*, and *E. paunosa*, which are the mildew of the pea and the peach. *Botrytis difusa*, forms the white mealy substance on the leaves of onions and similar plants. The mildew which forms the whiteness on the leaves and stems of roses, is the *Acrosporium monilioides*. The attacks of all these parasitical fungi are brought on by an unhealthy state of the plant, occasioned by a want of nutrition, an excess of it, or by atmospheric causes. Deep colored roses and peaches, are the most liable to mildew, and this has been supposed to arise from constitutional debility, for their color is owing to a want of power to decompose carbonic acid. Mr. Knight stopped the attacks of mildew on his pear trees, by taking them up, washing their roots clean, pruning them closely, and removing them to a new situation. The best preventive of the mildew in wheat, is a well drained and limed soil, the avoidance of too much fresh manures, and the removal of all causes that prevent a free circulation of air.

MILK.—Milk is composed of water, serum, &c., and globular particles one ten-thousandth of an inch in diameter, which are composed of fatty matter, (butter,) and a coagulable matter, (*caseum*,) from which cheese is produced. These globules rise and constitute cream. By the agitation of churning, the fatty globules unite into a mass, leaving the buttermilk, consisting of caseum and serum. The following table from M. Pareira, will show the preparation of the several ingredients in the most common kinds of milk.

100 parts of the Milk of the	Cream.	Butter.	Caseum	Sugar of Milk.	Total of Butter, Caseum and Sugar.
Ewe,	11·5	5·8	15·3	4·2	25·3
Goat,	7·5	4·56	9·12	4·38	18·6
Cow,	4·6	2·68	8·95	3·60	15·23
Cow,	not stated.	4·5	6·10	3·5	14·10
Woman,		5·16	0·180	7·62	12·96
do.		5·2	0·250	7·96	13·38
do.		5·18	0·240	7·86	13·28
Ass,	2·9	......	2·3	4·5	6·8
Mare,	0·8	......	1·62	8·75	10·39

From this table, it will be seen that the milk of the ewe is richer than any others in the total of its contents; that woman's milk gives the greatest per cent of butter; and that mares' milk yields the most sugar of milk; but slightly exceeding, however, woman's milk in this respect.

TRANSACTIONS OF THE N. Y. S. AG. SOCIETY.

That the friends of the State Ag. Society may know the estimation in which their annual publication is held in other states, we copy the following notices:

"We have received from the Secretary of the N. Y. State Agricultural Society, the Transactions of that body for 1842. It is a large octavo volume of more than four hundred pages, handsomely printed, handsomely bound, and full of valuable matter. It contains several portraits of animals and implements of husbandry, plans and elevations of farm buildings, &c. It is a valuable work, and hereafter the Transaction of the N. Y. State Agricultural Society will be quoted and referred to as good authority, and as a fountain of agricultural information."—*Maine Farmer.*

"The volume contains 410 pages, as varied in subjects as they are interesting to the agricultural reader. The several communications are from gentlemen of experience in farming, and of enlightened minds, and combining, as they do, practice with science, lends a value and a charm to their writings which cannot be too highly appreciated. We shall transfer to our columns much of the contents of this rich work, and can therefore vouchsafe to our subscribers, in the current volume of the American Farmer, a fruitful harvest of that kind of learning, which is treasured the more by the husbandman, because it is the result of practical knowledge illumed by the lights of science."—*Am. Farmer.*

"As in the last volume, so in this, we meet with matter of great ability and of general and absorbing interest. Among other things, we find two prize essays from the pen of Willis Gaylord, Esq., occupying sixty pages, every word of which we should be glad to transfer to our columns, if the nature of our work permitted. As it is, we must be content with making brief extracts from such portions of these essays as we deem most interesting to our readers."—*Southern Planter.*

"This is a handsome volume of more than 400 pages, and however exalted our expectations may be in relation to the agriculture and public spirit of the Empire state, it really does them credit. We have read the address of Gov. Seward at the Annual Fair, last fall, and that of the President, James S. Wadsworth, before the Society in the winter, with a great deal of satisfaction. There is embodied in the work, an abundance of matter in detail, highly beneficial to the farmer, and particularly calculated to encourage him to look abroad among his brethren of the plow, and gather from the progress they are making, fresh incitements for the agricultural race before him."—*Farmer's Cabinet.*

"This work is too valuable to be despatched in a single paragraph, and we cannot better serve the public and do justice to the many able and instructive articles it contains, than by giving them at length in our columns as time and opportunity offer."—*Farmer's Advocate.*

Original Papers from Contributors.

Lloyds, Essex Co., Va., May 16, 1843.

MESSRS. GAYLORD & TUCKER—I enclose a communication, which was prepared for the Cultivator by my grandfather, Mr. JAMES M. GARNETT, and accidentally mislaid. Since his lamented death, I have found it, and now forward it to its original destination.

I avail myself of this occasion to say how highly he esteemed your paper, as one of the most useful and efficient friends of agricultural improvement.

Yours, very respectfully,
M. R. H. GARNETT.

COMMENTS ON THE NOVEMBER NO. OF THE CULTIVATOR.

THE circumstance of this No. containing little else than details of the proceedings of the various Agricultural Societies in New-York and elsewhere, has produced some malcontents among your readers. But with all due sympathy for the querulous temperament of such complainants, I must venture to tell them that they have no just cause for dissatisfaction. Are they so short sighted as not to perceive that such details furnish the most satisfactory proofs that the agricultural spirit is rapidly diffusing itself throughout our whole country; and that the mere statement of those details is calculated to rouse this spirit into action in all those parts of the U. States wherein it has never yet exhibited any symptoms—even of existence? We are all mimetic creatures, and hence some cynical wits have insisted that we were at least cousin-germans to the Simia or monkey genus of animals. But be this as it may, 'tis certain that our imitative propensities will lead us to do, or at leat to attempt to do, whatever we see others do before us,—especially if we once believe it to be the *fashion*. Consequently, even our terrapin-like brethren will be tempted to establish Agricultural Societies, when they see such associations springing up around them in every direction, and infusing animation and activity into extensive districts, where all before was listlessness and deadly torpor.

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YOUR Governor's Address to your State Agricultural Society, deserves all the praise you have bestowed upon it. But if a private, unknown individual, may be permitted to dissent from any part of the production of a gentleman who occupies one of the "high places" in our country, I would most respectfully beg leave to say, that there is *one* material point in which I cannot agree with him. It is in regard to what he says of the immigration of foreigners into the United States. He seems to take it for granted, that it must *necessarily* have been *indiscriminate* from the beginning. But this I have never been able to see. Why might we not have received the thousands upon thousands of meritorious individuals who have sought a home in our country, and whom I prize as highly as any person whatever, with a far less portion of the vagabonds, paupers, and fugitives from justice, who have been annually disgorged upon our shores, and have been spreading in all directions, such an enormous and fearful amount of moral poison, that the united power of all our conservative principles can scarcely counteract its greatly diversified and fatal influences? In my humble opinion this might have been prevented in a great measure. But perhaps Gov. Seward considered our policy so fixed on the subject of immigration, that it was not worth his while to state any objections to it.

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IN examining the Reports of your various Committees, with a view to ascertain the principles upon which they have awarded their premiums, it has struck me with some surprise what little regard they seem to have paid to the *cost of production*; although this surely should be made the primary consideration both in offering and awarding premiums. The greatest art of husbandry, in all its branches, *is* to obtain the most beneficial results, so far as practicable, at the least expense; and all premiums should have for their object *the attainment of this art*, or they do more harm than good,—not only to the particular branch which they are designed to encourage, but to husbandry in general, by promoting extravagance rather than economy. The wealthy may obtain such premiums, who care not at what expense they are procured, but the comparatively poor farmer or planter is a fool, if *he* becomes a competitor for such costly distinctions. I will take the single case of the first premium awarded for the fattest ox, to illustrate my meaning. This was given to Mr. P. N. Rust, whose ox, I have no doubt, *was the fattest*, probably too fat to eat as well as beef that was somewhat leaner. But that is not the point to which I would call the attention of your readers—it is to the *cost of production*. The facts by which they are to be calculated are thus stated. Time of fattening the ox, 19 months, or 570 days. Corn meal given per day, from 12 to 16 quarts, average 14 quarts. Corn valued at 37½ cents per bushel, although I think it should have been estimated at 40 cents, as it was ground into meal. Hay per week, 25 cents worth. Ruta bagas or potatoes per week, 50 cents worth. No allowance was made for attendance, probably because the manure was deemed sufficient to pay for it, although I doubt it. Now let any person who pleases, cast up the whole expense of fattening Mr. Rust's ox, and then say how many beef eaters he believes there would be out of every hundred New-York farmers, if their beef meat cost them all as much; or how many beef fatteners for market could be found throughout the whole state. Unless my arithmetic deceives me, he would guess that they would be "rather scarce."

MR. LINCOLN'S report upon swine, shows that papers of the kind need not be such dull, unentertaining matters of fact things as they generally are, but that in the hands of a master workman, they admit of much playful and humurous embellishment. His play, however, upon the words "*here*" and "*hair*," is not of a piece with the rest of his report.

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THE speeches at your agricultural dinner were all of them of the right sort for such an occasion; and some of them tickled me "considerable," as brother Jonathan would say. It would have gratified me highly to extend the right of fellowship to all the speakers, for each said something very appropriate, at the same time that all evinced the true spirit of amity and concord which should forever bind together our whole brotherhood, however separated they may be by country or distance.

YOUR own account of the Show at Worcester, and Mr. C. N. Bement's account of the Berkshire Show, deserve the particular attention of all our brother farmers, who use horses or mules for the plow instead of oxen. Very few, I believe, have yet made a fair comparative trial between the three kinds of team; although it is a matter of great importance, as regards the expense, to ascertain which it is best to keep. I have examined much evidence on the subject, but have never made any comparative trial on my own farm. Yet my own belief is, (from all I have heard or read,) that a great saving might be made by working oxen only. This belief has been confirmed by noticing that our Yankee brethren, who are certainly the best practical economists in our country, universally use oxen. It is within my own knowledge that they are quite as docile as horses or mules; that they will plow single, and without leaders full as well; and that they may be as readily broke to draw single, in light carts, wherein they will move as fast as ordinary horses or mules do at such work. They will likewise bear heat as well, if regularly fed and worked in the same manner. Indeed, I once knew an instance where a friend of mine, who having a mixed team of horses, mules and oxen, had "over cropt" himself, (as they say in the south,) and his oxen stood their work throughout the season much the best. Another instance was mentioned to me, some years ago, of a southern farmer, well known to me as a good manager, who worked oxen only at the plow, and without giving them any grain. But he kept a double set, and worked each one half the day. During the interval of rest, they had plenty of grass. Now, even admitting that horses or mules could be treated in the same manner, and do the same work, oxen would still have the great advantage of being *eatable*, which horses and mules *are not*, at least to the knowledge of us Americans.

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THE account of the exhibition by the Horticultural Society of Boston, is one of the most interesting things which has ever appeared in your paper; and ought to excite every where, an earnest desire to encourage similar associations, and similar modes of celebrating their anniversaries. Such social meetings of the two sexes deserve all the encouragement that can be given to them, for they result in nothing but good—unmixed good to both parties. To us men the effect is highly beneficial in every point of view; it softens the natural coarseness of our manners and conversation; it refines our grovelling tastes, and elevates all our moral aspirations. Whilst the other sex,—if treated as we ought to treat them, and as they would be on such occasions,—will be led by it, in aid of other moral influences, to form that just estimate of all their peculiar duties—of their true position and powers to do good in society, which will really make them at once the most amiable and best of all God's known creation.

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YOUR London correspondent has stated one fact into which I hope you will make farther inquiry; as your readers, I am sure, would be highly gratified by it. This is the Belgian Count Howpesch's "*patent for the preparation of a manure, more powerful and cheaper than any yet invented.*" None of these recently discovered manures, I believe, are said to combine both the essentials of superior power and cheapness, unless it be Mr. Bommer's; and he has neglected to give us all the facts which would enable us to judge. The prices of his patent rights are moderate enough; but unless we know the cost of the material, and the process necessary to make the manure, and could also see some authentic statements of its effects when applied to the earth, we must remain rather sceptical in regard to the full extent of the promises made for it. Still the recommendation of your committee is sufficient to justify as many experiments with it as will suffice to determine its true value. Your correspondent mentions another thing which has excited at least my own curiosity, and probably the curiosity of many others of your readers. I mean the Agricultural Tour of Count Conrad De Gourcy, through England and Scotland. Would it not make a very saleable reprint in our country, or a good article for your paper published in parts? I have no doubt that a majority of your readers would be much better pleased with such an article, than with the accounts of enormously large fat pigs of rival breeds; of prodigiously big roots, and sundry other marvels which they occasionally see in your paper, teaching as little to amuse as to edify, but for the publication of which, be assured Messrs. Editors, I do not blame you. I have always supposed that such communications were sent by some of your subscribers, worthy men probably, whom you were unwilling to disoblige. But at the same time I could not help suspecting either that they were writing for such readers as some satirist says,

> "Are pleased with a feather—tickled with a straw,"

or that they themselves belonged to the same class of easily pleased, good natured quid nuncs, who are quite as numerous among our brethren as they are in other classes.

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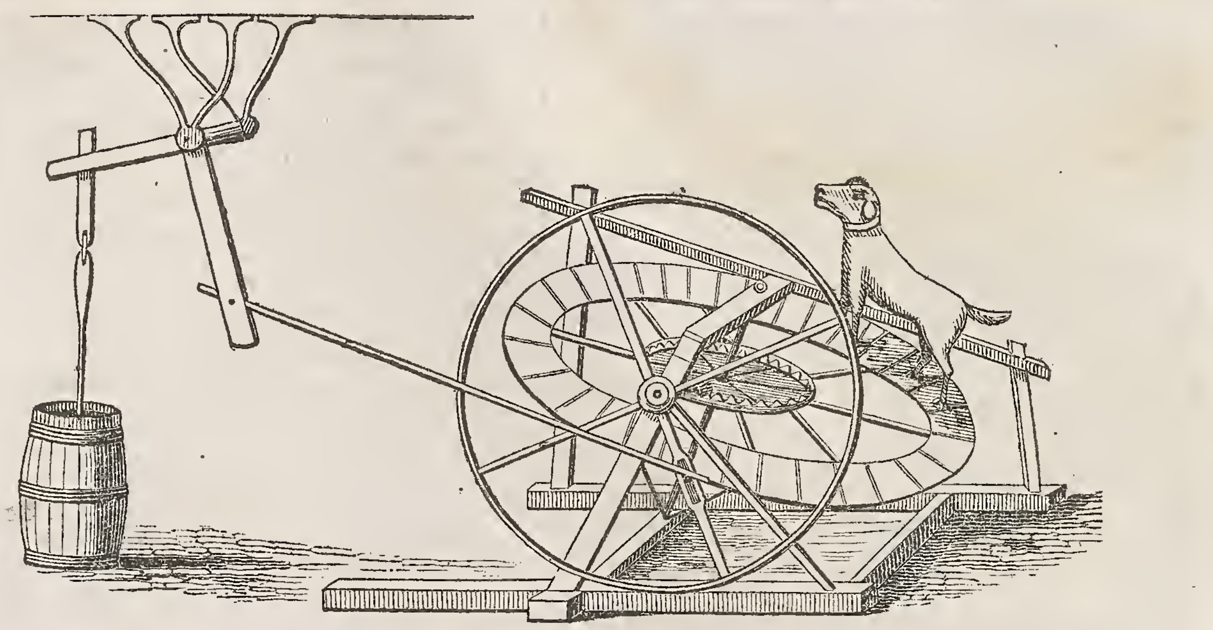
ON the last page of this number I see that *another* wheat machine and horse power has been patented to a Mr. Warren. This practice of granting patents for implements and machines of every kind, but especially for those called *agricultural*, merely on account of some little alteration which is really no improvement, has become so common as generally to excite a strong prejudice against every thing which has the term "*patent*" stamped upon it. With many persons it amounts to a noli me tangere—*touch me not*. I mean not to apply the remark to Mr. Warren's, for I never saw them; but the advertisement presents a fit occasion to suggest the propriety of still farther amending our patent law, so as to increase the difficulty of obtaining patents. One mode of doing this, would be so to apply a part of the large revenue derived from the patent office, as to provide the means of actually testing all agricultural machines and implements presented for a patent, and making it the imperative duty of the chief officer not to grant one in any case, unless upon actual trial it should appear that some real improvement had been made. Models alone will very rarely suffice to demonstrate this satisfactorily; for the most scientific machinist cannot always be certain how a machine will work until he sees it in operation. As the patent law now stands, the fees paid for patents constitute a source of revenue, and consequently there is a constant temptation to grant them on very insufficient grounds; and hence it is that patent machines and implements so often prove good for nothing, that few experienced farmers will risk their money in buying any of them, until they can see them tried, or can obtain assurances of their efficacy from some person on whose judgment and veracity they can depend.

COMMENTATOR.



DOG POWER CHURN.—(Fig. 58.)

MESSRS. GAYLORD & TUCKER—I herewith send you a sketch of the Dog Power machine in general use for churning in this (Orange) county. The churns are generally of the capacity of 1½ to 2 barrels each. One dog of the ordinary house dog species is sufficient to work one churn, but when two churns are worked at the same time, as is usual in our large dairies, two dogs will be required to drive the machine. The tread wheel is ordinarily made about 7 or 8 feet in diameter. The large balance wheel is now made of cast iron. Besides this, the whole affair is so simple, that further explanation is deemed unnecessary; as I think any individual, after an examination of the above plan, will understand it perfectly. The power, of course, is easily used in the cellar, while the machine is entirely outside the building.

Your ob't serv't,

Newburgh, June 26, 1843.
T. M. NIVEN.

CULTURE OF COTTON.

Messrs. Gaylord & Tucker—I perceive from your last number that Dr. Cloud's plan of cultivating Cotton, or at least his statement of its results, is received generally with small favor and less faith. While those of "little faith" and perhaps of smaller works, are condemning his plan and discrediting his statement, it is but fair that those who have adopted similar modes of cultivation, with similar results, should give him and the public the benefit of their testimony.

In the months of January and February, in the year 1841, I had a lot of 5 acres opened at intervals of 3½ feet, with furrows down to, and sometimes into the clay. In these furrows I deposited stable manure at a rate of not less than 400 bushels per acre, and running immediately upon each side of these furrows with a turn plow, I buried the manure. Thus my beds for cotton were partly made: the superincumbent soil prevented, at least in part, the escape of the volatile portion of my manure, which being put deep, and the soil gradually accumulating over it in the process of cultivation, it was kept at all times properly moist, without which it does but little good.

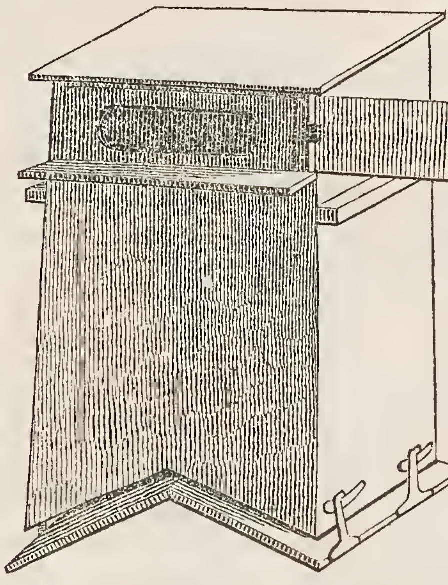
Cotton being a tap-rooted plant, I doubt not that it would be an improvement upon the above plan, to open with a coulter plow, the clay or subsoil in or rather under these furrows, before depositing the manure; to the end that the soluble portion of the manure might subside gradually to a still greater depth. The lot which I manured upon the above plan, was originally a thin soiled chestnut ridge; had been cleared between forty and fifty years, and was of course completely exhausted. Indeed, 200 lbs of seed cotton per acre, would have been considered a good crop for such land, upon the usual plan of cultivation without manure. About the last of March, I put two additional furrows with a turn plow, which completed my beds. These beds I opened with a coulter, sowed the seed in the usual manner, and covered with a board. This lot, thus manured and planted, received no extra care in the after culture, but was treated in every respect like the balance of my crop. The result was 4,430 lbs. of seed cotton from the lot, or 886 lbs. per acre. But as I sowed this lot in wheat in the fall of that year, and before the cotton had been all neatly gathered, I may fairly set down the yield of the lot at 4,500 lbs., or 900 lbs. per acre. Here was an increase of between four and five fold the first year, and as I have planted upon land similarly treated, and gathered a second crop equal to the first, I consider myself as yet in the midst of an experiment, the final result of which can alone determine the full amount of benefit to be derived from a single application of manure. It will be at once observed that my plan differs in several points from Dr. Cloud's. I drill at 3½ feet, and chop out in the usual way, leaving the stalks as nearly as possible from 18 inches to 2 feet apart: while he checks at 3 by 5 feet. Thus he gives to each plant an area of 15 square feet, while I do not give an average of 7. He spreads and plows in 300 bushels of manure per acre, broadcast, while I apply none in that way. His was a deep sandy soil, with clay at a depth of 2 or 3 *feet;* mine a very shallow, stiff, red soil, with a very firm red clay, lying at various depths, from 0 to 6 *inches* below the surface, with an abundance of white flint or quartz rock upon it. The 300 bushels of manure which he applied broadcast, was doubtless of great advantage to his crop, and would in all probability have doubled mine. In other respects, I think his plan the best for his land; and mine, with a little more space to each plant, the best for mine.

The incredulous will of course consider this experiment of mine as lending no countenance to Dr. Cloud's statement; but when every circumstance is fairly considered, I think it does. My experience, however, does not stop here. I cultivated the same year another small lot about 85 yards long and as many wide, or 7225 square yards, which is 1 477-968 acres, or rather less than an acre and a half. This lot, in its primitive state, was of precisely similar quality with the 5 acre lot. About one-third of an acre of this, certainly not more, had been for several years a stable lot; the balance of it, descending from this by a considerable declivity, I cultivated, believing it may have been benefited by washings from the stable lot portion. The surface soil had been nearly all washed away for years. The manure upon the stable lot portion had been carefully scraped up and removed, so that the manure left was such only as had been absorbed by the soil. To the other portion no manure was applied. This lot was broken up deep and planted about the last of March, and the rows running horizontally around the declivity, were from 3 to 4 feet wide, accordingly as the land was considered poor or otherwise. From this lot I gathered 1,707 lbs. of cotton in the seed. Of that I set down 1,400 lbs. to the stable lot portion, leaving to the balance 307 lbs., which I am sure is a liberal allowance. But little of the weed on this lot, except on the stable lot portion, attained a height of 18 inches,—much of it not even 6 inches. The stable lot portion had attained an average height of 6 feet by the last of July, and was so much interlocked that it was impossible to pass through it without doing great injury to the branches. By the middle of August, the weed on this portion ceased growing, and the whole vegetative energy of the plant seemed directed to the development and maturing of bolls, of which there were vast numbers. This cotton suffered much from two causes. It was too much crowded, which caused a very great number of the earlier or bottom bolls to rot for want of sun and air. Towards the latter part of August, a wet spell of weather of several weeks duration, set in, which producing a second growth of the weed, caused vast numbers of furns, blooms, and young bolls to fall off, which a moderate season would have matured. Under all these disadvantages, there was still a yield at the rate of 4,200 lbs. per acre.

I have only room to add that I highly approve of Dr. Cloud's plan, and that my own experience and observation forbid that I should discredit the general correctness of his statement. I have long been of opinion that it would be of great service to the cotton region of S. Carolina and Georgia particularly, to divert at least one-third of all the labor employed in raising cotton to raising manure. The result would be equal crops of cotton at least, upon a greatly reduced number of acres; the improvement and renovation of our worn lands; larger crops of corn and grain; more hogs, cattle, sheep, horses and mules raised at home—our country, in short, adorned, beautified and enriched.

Very respectfully, yours,
S. Fouche.

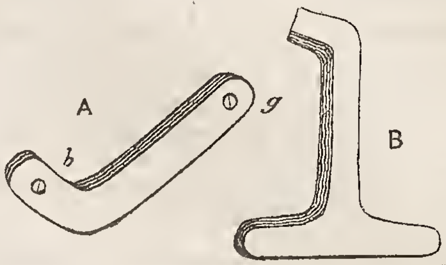
Taliafero co., Geo., June 23, 1843.



AN IMPROVED BEE HIVE.—(Fig. 59.)

Messrs. Gaylord & Tucker—I propose, in the following communication, to present to your readers the plan of an improved bee hive, which they can use *gratis.* I believe it to be but little, if at all, inferior to any that has ever been presented them. The various plans that have heretofore appeared in the Cultivator, are either non-swarmers, or they are encumbered with a patent. Experience has taught us that non-swarming hives are not as profitable as the swarming, and their use cannot be advisable, except for purposes other than profit. The patent hives appear to be nothing but improvements upon the *Charlieshope hive,* said to have been invented by Mrs. Mary Griffith of New-Brunswick, N. J. The writer has used the above hive with admirable success. A description of it may be found in the North American Review, for June, 1828, or the Family Encyclopedia, edited by my respected townsman, C. A. Goodrich. The plan here presented is another improvement upon the same hive. (See illustration, fig. 59.)

Directions for Making.—In making the hive, use nothing but clear stuff, such as is free from knots and shakes. Cut the two side boards thirteen inches wide and twenty-four inches long; cut the back board fourteen and three-fourth inches wide and twenty-four inches long; cut the front board fourteen and three-fourth inches wide and eighteen long. These four boards are to be planed smooth, and put together in a good, workmanlike manner, nailing the front and back boards to the side boards. Cut a board for the top, so large that, when nailed on, it will project over the four sides of the hive about one-half of an inch. Fit a board into the hive that will shove in above the front board, of sufficient length to project out front, when it is put in its place, say half an inch. This board divides the hive into two apartments; its under side should be left rough, for the convenience of the bees, as they can more easily attach their comb to a rough than a smooth surface. To form a communication between the two apartments, bore two holes, one inch in diameter, about three inches from each corner of the dividing board, making in all eight holes. Let a box, made of half inch stuff, be snugly fitted into the upper apartment, for a depository of surplus honey, having holes in the bottom corresponding with the holes in the dividing board. For the convenience of the apiarian, introduce a glass into the front end of this box. Fit a door to the upper apartment, and hang it at one end with a common door butt. In cutting the angles for the bottom of the hive, find the centre of the front, (also of the back,) five inches from the bottom; and from these points, draw lines to the corners of the bottom and outer edges. The small triangular pieces, below these lines, must be sawed out. For a bottom, cut two boards, two inches longer than the bottom of the hive, and fit them together at such angles as will fit the bottom, and of such width as to project, when put in its place, three-eighths of an inch on each side. Secure the bottom from warping, by nailing cleats to the under side. The bottom may be hung at the back with common butts, and suspended at the front with hooks made of wire; but it would be better to suspend it on hooks and cleats. It can then be easily removed. The illustration A. represents a cleat, and B. a hook.—Every hive will need four of each, two on each side. The cleats (do I name them right?) should be three-eighths of an inch thick, and from *b.* to g., two inches. The back end of these cleats, when screwed to the hive, must be elevated so as to form an inclined plane, so that when the bottom board is pushed back, it will close the hive. The hive is kept closed by means of a button on the front. By means of this button, the apiarian can give the bees any desired quantity of air, as the turning of the button will let the bottom slide back, and when it is entirely unbuttoned, if it be rightly hung, the space between the hive and bottom will be three-fourths of an inch. Across each side of the hive, nail a strip of wood, on which the hive is suspended when in the apiary. The above directions may be thought superfluous. They are not intended for a carpenter, but for the farmer, should he wish to make his own hives during the leisure of winter. To such, they may not be useless.



The superiority of the above hive over the common box must be apparent to every one who is at all acquainted with the management and culture of bees, or who knows any thing concerning their nature and habits. In extracting honey from the common box, it is always necessary to use the pruning knife, unless the apiarian plots the entire destruction of his bees, and executes his foul purpose by the use of fire and brimstone. The pruning of bees in autumn is unadvisable and *unnecessary,* if the above hive or the Charlieshope is used.

Other advantages it derives from its suspended nature. This property it possesses in common with the Charlieshope and Weeks' and Hall's patents. A suspended hive is removed from the depredations of the mouse. Besides, it is easier opening and shutting it for the purpose of ventilating, or preventing the depredation of robbers, after the destruction of the flowers by the frosts of autumn. Few hives will be found as convenient as this, when you wish to introduce in it a new colony. This is owing to the shape of its bottom.

A very useful article to an apiarian is a pair of mittens, made so long as to draw over the coat sleeves, and cover the arms half way to the elbows. They should be bound round the top with India rubber, that they may hug the arm. A pair of leather gloves, pieced up with the leggings of a pair of stockings, and bound as directed above, are better still. N. of Worthington.

Berlin, Ct., Feb. 16, 1843.

ON THE MANAGEMENT OF DAIRY COWS AND CHEESE DAIRIES.

BY ALONZO L. FISH OF HERKIMER CO., N. Y.

(Continued from page 115.)

Bulls—Management of Pasture and Meadow Lands—Proper Time for Cutting Hay—Culture of Mangel Wurzel—Use of Plaster—Indian Corn sown Broadcast for Fodder—Feeding Dairy Slops to Cows instead af Swine—Best method of Feeding Swine—Barn for Dairy Cows.

Bulls of a small size are the best for dairy cows, for gestation of such a size will produce a lighter draft upon the system of the dam, than those of a larger breed.

The dairyman should not plow much with an object to obtain a great profit, farther than may be necessary to keep his land well stocked with grass; for if the cream of the soil is used to produce grain, we shall be sure to not raise it upon the milk, for there are but few soils among us so full of cream as to raise it abundantly upon grain and milk too.

It is a practice too common among farmers when about to turn over a sward, to graze it as close as possible before plowing, as a matter of economy. This is like loaning money at 14 per cent, and taking the interest in advance to evade the civil law. But nature's laws cannot be thus evaded. Nature has set the farmer a noble example, by annually depositing her foliages upon the earth, by which the rising generation of vegetables are nourished and sustained by the elementary principles of their decayed predecessors. She is ever ready to assist in the execution of her organic laws. It therefore behoves the farmer in view of her example, whenever a piece of ground is to be tilled for its improvement, to mix as much vegetable matter with the soil as possible, to make it a better vehicle for the food of vegetables. The dairyman who has practiced feeding his meadow in the fall, and thus stripping the soil and roots of their natural clothing, will frequently find it incumbent upon him to till them to increase their productiveness. It now becomes necessary for him to refund the principal to the soil, which he has annually taken, in addition to a reasonable interest. He who would draw an annual interest from the soil as his profit, should not draw largely upon the principal from which said interest accrues.

Meadows "run out," (as the saying is,) by over grazing, and by the soil becoming so packed as to exclude the requisite atmospheric air to produce germination at a depth where it would not perish from the effect of frost, drouth, cold winds, &c.; hence the reason that June grass, strawberry vines, &c., are most abundant, because they are hardier than other grasses, and can be sustained by a shallower root and weaker soil.

As many acres of such land should be tilled annually as will use up the manure of the yards, by putting the manure of 6 or 8 cows to the acre, in the following manner, viz:—The soil should be plowed deep and thoroughly in the fall, and as much vegetable matter as possible turned under with the sod, to decay and mix with the soil. This should be thoroughly harrowed early in the ensuing spring, but not plowed again until near the season to plant. It should then be plowed deep and thorough, and well pulverized.

Potatoes are the best crop to improve such soil, as the process of their culture pulverizes the sod and exposes the soil generally to the action of the atmospheric air. After the potatoes are harvested, it will be well to plow the land and expose it more thoroughly to the effect of the air and frost. Early in the ensuing spring, the same ground should be manured, harrowed and plowed several times, when it is suitably dry, which will prepare it to receive a stock of grass.

It is the first object with most farmers, to put on a crop that will produce the greatest profit the present season, and stock their ground to grass with the same. But this is not the right way to prepare the soil for successive drafts of interest. Such a crop should be put on to stock grass with, as will admit of being sown early, that the young grass roots may have an opportunity to get a deep firm hold in the soil before the grain and weeds get the start of them, and the soil becomes so packed as to prevent their penetration. Those grains which produce the least shade are most desirable, that the young grass may not be overshaded. Spring wheat, rye and barley, do well to stock with, as they may be sown so early that their speedy growth will not interfere with that of the grass.

It is better to over stock with grass seed than to fall short of a proper quantity; as nature will easily dispose of the surplus, but cannot properly supply a deficiency. I have usually sown twelve quarts of timothy seed to the acre, when sown clear, and the quantity reduced in proportion to the quantity of other kinds of grass seed added. It is well to mix several kinds of grass seed, to stock with, as the soil will yield a greater bulk of a variety of grasses than of a single kind.

Having been thus prepared, the soil will become deeply and thoroughly interfused with the roots of the young grass, which will prevents its packing, and contribute to its annual support by their transmutation. This is one of the most vital principles in the soil, and the least observed by the majority of our farmers, (if they may be judged by their practice.) In short, if the young meadow is well set, and left to receive the benefit of its natural clothing, the roots will acquire an extensive growth, and their annual transmutation will increase and preserve the vitality of the soil for many years, if not during the continuance of the practice.

But if the meadow is poorly set, and its clothing grazed off, the roots will degenerate, the soil will become closely packed, its vitality will diminish, and at length produce little or no profit.

I am opposed to rolling meadows: for a farmer thus goes through a course of treatment with a piece of land, with a view of benefitting it by the aid of nature's organic laws, and protracts his efforts beyond the accomplishment of the object, by packing it down again with a heavy roller to seclude her benefit.

Hay should be cut up and cured for cows when in its fullest bloom, as it is then most nutritious. Some object to cutting at this period, because more sun is required to cure it properly; and that it does not spend as well as when cut later. Hay may be put into tight barns much greener than is usually practiced, if well salted when put in: which should always be done for the improvement of the hay and stock. It is much better for cows to eat salt in their every day's food in proper proportion, than in large quantities, as is apt to be the case when they are only occasionally fed; six or eight quarts to the ton, may be profitably used. When grass stands until it becomes more ripe before it is cut, it assumes too much the nature of grain for milch cows. It may "spend farther," (as the saying is,) because it is harder to digest, and cows will not eat so large a quantity of it as when cut in full bloom. I have often observed that my cows would eat *more weight* of good hay, than straw; but was not convinced that the straw was of equal value, although it "*spent further*."

It is the practice of botanists to procure their plants for medical purposes, when in their most vigorous growth, and great care is taken to cut and cure our garden herbs when in bloom, for the same reason that grass should be cut for hay at that time.

There is a certain period in the growth of plants at which the ingredients that form the main bulk of vegetable matter, lose their equilibrium of chemical attractions, and take the first step towards a decomposition of their elementary parts; and it is evident that this takes place soon after the bloom of the plant closes the process of generation, and may be readily discovered in meadows by the perishing of the lower leaves of the grass, and a general change in its color, and it should not be allowed to stand and take another step towards their final dissolution.

The *mangel wurzel* is the most profitable root for the dairyman to raise upon highly manured ground, as they are a hardy root, and not subject to injury from worms, nor easily overpowered by weeds. They are very congenial food for cows while feeding hay, and there is no danger of over feeding with them. But they will not yield largely as a field crop, as our common soils are not sufficiently rich to produce them in abundance. There is no soil too rich to grow them successfully, if properly tended. If a piece of ground is designed for their growth, which has been hard trodden, it should be plowed deep and fine, late in the fall previous to sowing, that the frost may dissolve the hard lumps. Ground that is plowed while covered with water, will not bake in a late fall sun, and the action of the frost will render it light and fine before warm weather in spring.

Ground designed for this crop should be highly manured, and well pulverized and mixed, when suitably dry; and it is well to work it over immediately before planting the seed, to keep the weeds in check. From the 15th of May to the 1st of June, is the proper time for planting. The ground may be readily prepared by setting a half dozen cultivator teeth in a pole or scantling, 15 inches apart; a couple of poles will answer for thills, and you are prepared with a machine that will furrow with one horse, an acre both ways in two hours —dividing it into squares of 15 inches, which is a proper distance for them to stand.

The seed should be well tried, to be sure it will grow. Scalding water should be poured to the seed 12 hours previous to planting, which will forward their germination and give them a fair start of the weeds. Not less than two seeds should be deposited at the corner of each check, and covered two inches with fine earth. The ground should be hoed before the weeds get deeply rooted, as they will then be more easily subdued. The hoe should be frequently used, and only one plant allowed to stand in each corner, and the blank filled by transplanting, which may be done at any time before the plant gets too large. When the soil is very rich and the season wet, they will run too much to top, and require too much serum for the health of the plant.

The root being deeply shaded, and kept from the influence of the sun, is not capable of performing its part in digesting the inhalations. The root of this plant feeds largely upon the vital properties of the soil; while the lungs or leaves are provided also with extraordinary capillary properties by which they collect food largely from the atmosphere. The want of a proper equilibrium between them may be observed by the lower leaves becoming of a paler color than the rest, and should be taken off and fed to the milch cows, as they are very nutritious. From 5 to 10 tons may be obtained from an acre (in vigorous growth,) in the course of the season, if properly tended, without injury to the root. Light frosts do not injure this root, but they should be gathered before they freeze hard, by pulling them and beating off the dirt that may stick to them, and put into large heaps or ridges; after wringing off the tops with the hands, and secured from the frost by covering them with straw or tops. When there is no danger of freezing, they should be exposed to the cool drying air, to prepare them for the cellar. They should not be kept too warm during the winter.

Plaster should be sown early upon pastures, that the root may receive its earliest benefit in its germination; it is then it needs an artificial stimulant if ever. I have practiced for several years sowing one bushel of plaster to the acre on my pastures, in the month of April, on the last small snows we have in that mouth, and find it a very convenient time, as it can then be sown more uniform; I am convinced that plaster sown at this time is more beneficial also, than when sown at a later period. I have generally repeated the same quantity about the 1st July, and am seldom destitute of plenty of nutritious food for the cows, after they commence their milk in spring, until the close of the milking season.

I again repeat the remark, that it is highly necessary, after cows have come freely to their milk, the fluent state of the system should be kept up by being regularly fed with nutritious food.

If they are allowed to shrink largely in their milk, (especially in the latter part of the season,) and then an attempt is made to increase the milk by extra feed, it is apt to be taken to flesh. It generally happens in the months of August and September, that pastures get rather dry and infected by grasshoppers, and cows are troubled severely with flies, heat, &c. in the day time. During this season they should be fed plentifully in the morning with succulent food.

I would therefore suggest sowing Indian corn, broadcast, for this purpose, at the rate of two and a half bushels to the acre; a small kind of corn is preferable, as the stalk will not grow large. This crop should he sown at different periods, and allowed 80 or 90 days to grow; at which age it will be found to contain the most saccharine matter, and will make the most milk. It is not only sweeter when grown in this way, but yields much more of the saccharine juice than when planted in the usual way and allowed to grow the natural fruit, and will grow much taller. Upon ground that is strong and clean, it will grow from five to nine feet high in 80 days. This should be cut with a scythe or sickle, and fed in a green state. If early frosts should overtake the crop before it is consumed, it should be cut before freezing and put into large shocks, being set upon the butts. It will keep in this condition for several weeks, until it can be fed out profitably. It is also an excellent feed for winter, when well cured, for milch cows, calves or dairy cows, late in the fall or in the spring. I have tried an experiment with this crop the present season, and the result is even beyond my anticipations. I commenced feeding it to my cows about the 10th of September, after feeding them plentifully for several weeks with mangel wurzel tops, which had kept up their fluency to my full satisfaction. On the third feeding, I found the milk had increased two quarts to each cow, with an uncommon sweet flavor, making the best curd I have ever seen, adding one-half as many lbs. of cheese as I have cows in my herd. The cheese appears to retain a peculiarly delicious flavor, hence I am firm in the belief that dairymen will find it beneficial for them to raise more or less of this crop annually, to protract the fluency of the milk New ground is very congenial to its growth. From 10 to 15 tons may be raised to the acre, and this quantity may still be increased by extra preparation of the ground

I have been experimenting for several years, to ascertain, if possible, how the greatest profit may be derived from the slops of a dairy, by the various modes of making beef and pork from them, and by feeding them to my dairy cows, to make milk; and have come to the conclusion that feeding them to cows is the most profitable. 1st. Because whey is strongly impregnated with the real properties of the stomach, which it retains after the coagulating process is finished, and which operates as a strong chemical agent to assist the gastric juices in converting the various substances that are taken into the stomach into a uniform mass, called chime. After having thus performed its first important agency, it may be traced still further to its agency in producing an abundance of chyle or milk; as it still retains many of its original properties, and is more readily absorbed by the secretive glands than a raw material. 2d. Because I have satisfied myself by actual demonstration, that our house slops and other coarse feed, such as is generally fed to swine, will make as many pounds of cheese as pork, if properly managed; and one-third more beef than pork, when fed to neat stock at any age.

If swine are fed chiefly upon dairy slops, they should be closely confined; with an opportunity to sleep on dry earth if they choose, in the heat of the season, as they will require less solid food to keep them thriving. Swine thus fed, should be fattened before the weather gets very cold in the fall; as it requires less labor then to prepare food, and keep it at a proper temperature to feed. I have made the most pork, and the quickest, from the same value of feed, in the following manner, viz:—Fill a kettle half full with potatoes, fill up the kettle with sour apples and sufficient clean water to boil them soft, without burning; while hot, mash them fine together, and add, in the process of mashing, one-eighth the whole quantity of provender meal, (be sure to mash fine,) to this add whey or other slop enough to reduce it to thin slop. This should be fed at a temperature equal to that of the stomach, which is usually about 95 degrees Fahrenheit, in any quantity the animal will eat. A great assistance may be thus rendered to the digestive organs of fattening animals, especially the swine, which is apt to get inert, and will not rise until compelled to perform the offices of nature, or rid itself of pain occasioned by stupor or disease. This is generally the case with swine fattened with solid grain feed. As soon as the appetite is satisfied by eating the solid meal, it lies down to dose, until the undigested food creates an unnatural heat or fever, which tends to inflame and contract the absorbing glands of the stomach and intestines, until the animal will take but a small quantity of food and consequently thrive slow

But when swine are kept upon food prepared as above, they will receive the food into the stomach almost in a state of chyme; of a proper consistency that they will not thirst, to contract the secretive organs. The food is a proper acid to create an appetite to eat often, and will not scour or cloy; will keep the stomach always full, and receive it at a proper heat to meet the natural warmth of the stomach, and the secretions of fluid will be continually carried on without closing a single valve or stopping the wheel to fill a bucket.

Directions for feeding whey. Dairy slops cannot be conveniently fed to cows without some fixture to confine them to troughs or tubs. A regular milking barn is therefore the best preparation that can be made for this purpose, as it adds much to the facility of milking and feeding with hay, roots and other articles. My milking barn, which I think affords the best facilities of any floor I have seen, is constructed in the following manner, viz: The barn is 50 by 30 feet, with 14 feet posts, 5 bents, cross beams and joists 6½ feet from the first floor or sills, which provides room for 25 tons of hay over head, with a half tunnel or conductor, passing from the ridge in the center perpendicular through the mow; through which the hay is conducted to the center of the hall between the stanchions, when it is ready to be consumed by the cows. It has three doors on each side to admit the cows, and a free circulation of air in summer, with an 8 feet door at each end opening into the hall, which is 8 feet wide between the stanchions, affording also a free circulation of air, and sufficient room to feed and carry milk conveniently; with strong plank floors, on a descent of 4 inches in 12 feet, which is a sufficient pitch to carry off the urine. The lower end of the plank is propped back 2 inches from the sill, to give the urine free passage; under which space a trough is suspended to conduct the wash of the stables into a large vat adjacent to the root yard, for the purpose of making compost of coarse weeds, &c. The wash from the stable of 20 cows, thus saved, together with the dairy slops from the cheese-making room, which may be conducted into the same reservoir, will make manure enough annually to raise 500 bushels of roots from a half acre of ground, if properly managed, with little additional expense. A wide plank is fitted closely to the back sill, and raised from the floor even with the top of the sill, thus admitting the wash to pass under, while it forms a platform wide enough to allow each cow's calf to be tied to a staple or ring behind them, and stand upon a dry floor. The urine, &c. from the calf, will pass off in the same channel into the common reservoir, and the cows in going into the stable will choose the stanchion directly opposite their own calf, which will habituate them to occupy the same place through the season. This may be considered by some as *small change*, but I know of no better way to make large profits with *small prices*, than to save the whole, and improve the facilities for producing the same amount. My barn being 30 feet wide, gives me 8 feet between the stanchions, and a floor each side of them 11 feet wide, which leaves plenty of room to pass and repass behind the cows, and to clean after them. My stanchions are constructed to confine and relieve the whole number of cows in a stable with one motion, by a shaft being attached to the top of the stationary standard which passes through the top piece or plate 8 or 10 inches, and attached to each latch; and a shaft extending the whole length of the plate, running parallel with and attached to the movable stanchion or slide, which will raise every latch at once, by bearing upon a lever at one end of the stable, and confine every cow at once by operating the lower shaft in like manner. They may with the same fixture be relieved or confined separately, without interfering with the general arrangement. The stanchions are set 4 feet apart, including 7 inches space for the neck, which affords room to pass into the hall between each cow and plenty of room to milk them. A light half inch board with hinges fills the space between the stanchions, which standing aslant, will keep shut without latch or button, and make cheap convenient doors between the hall and stable. When it is intended to feed whey to cows, it should be commenced while feeding hay, before they get a taste of grass, for if they are not accustomed to it, a difficulty will be found in making them drink it.

The whey should always be soured before it is fed, which seems to lessen the cathartic qualities, and not so apt to cloy the new beginners. A few quarts only should be fed at first, with a little provender or bran, until the stomach is accustomed to it. The quantity may then be increased at discretion, care always being taken to feed a regular quantity, and not so much as to scour or cloy.

If it should have a tendency to scour, (which is often the case with cows before they become accustomed to it,) they should be fed wheat bran sufficient to prevent it; this should be prevented in the same way at all times, when occasioned by any other treatment. Each cow should have 4 quarts of provender per day, with whey, until the grass gets its full heart, which will carry the system into the heart of the season in full vigor and fluency.

(*To be continued.*)

CANADA THISTLES—ABORTION IN COWS.

Messrs. Gaylord & Tucker—Our friend, Dr. Thomson of Wilmington, Del., has given you, in the last number of the Cultivator, an account of two evils that have invaded our neighborhood, which seem to call for the serious consideration of your readers in every part of the country. Unfortunately, I have suffered in the same way, and would therefore record my experience for public benefit.

Some years since, a neglected farm came into my hands, where was an orchard of 1¼ acres, of which the Canada thistle had taken possession. As my wish was to go to the root of the evil, I determined to cut every thistle below the ground, just as they had attained the height of about fifteen inches, and apply a teaspoonful of salt to the bleeding root; conceiving, if the remedy had been sooner applied, some of the distant fibres might have escaped and set up for themselves. They were now in full vigor, and bled profusely; so the salt being taken into circulation, the result was total extirpation, root and branch. True, it was a laborious business, and the neighbors thought it would "never pay;" but it did, most amply, for not a thistle has since made its appearance, nor was the herbage at all injured by the application; nay, I have no doubt it was benefitted ultimately. Dr. Thomson has a small patch of these pests in a low meadow, the grass of which is peculiarly vigorous: I was grieved, the last time I passed, to see that he had dug a trench around the spot, about two feet wide and deep, throwing the earth on the sides, so as to isolate the circle, and was told he intended to cut the grass, and then cover the spot with salt so thickly as to destroy every vestige of vegetation. Now here again my experience has taught me: I once owned a small field of Lucerne, and finding that the natural grasses of the soil had begun to usurp the land, I made several experiments to ascertain the quantity of salt necessary for the destruction of the grasses, without injuring the deeply rooted Lucerne; this I found, but after the finer grasses had been annihilated, the land became filled with those of a coarse and deeply rooted species, which totally ruined my Lucerne patch. And will not this be the result on the Doctor's fine meadow? The bank of earth thrown up will be covered with weeds of gigantic growth, the present season; and long after it has been returned to the trench from whence it had been dug, will it require the greatest care and labor for their eradication; while, or I am much mistaken, the finer herbage within the circle will be totally destroyed by the salt, and its place, filled with the coarser grasses, will remain an unsightly gall for years. Now all this might have been avoided, and the destruction of the thistles accomplished, by a boy with a sharp knife and a box of salt, in the space of an hour, if taken at the proper season, and the herbage eventually benefitted by the operation; but so true it is, a man can manage the business of his neighbor better than his own, and one would almost suspect that it is in this light the injunction of holy writ is to be understood, when we are told, "Let every one look upon the things of his neighbor."

Dr. Thomson has suffered greatly from abortion amongst his dairy cows. It is fortunate that he did not go deeply into the improved breeds, else the loss would have been grievous. He considers it safer to change entirely his stock of milch cattle, many of which are excellent; but is he sure this will remedy the evil? It is perfectly right to advise the removal of the fœtus, &c. with the cow herself from amongst the herd; but abortion is the effect of a cause that must have its origin elsewhere. What does the Doctor think of the conjecture that it arises from the nature of the pasture and the surrounding atmosphere?—a damp, low, rich soil engendering, so it is confidently asserted, the growth of *ergot* on the luxuriant herbage, and producing a state of malaria which is believed to be the fruitful source of disease and abortion, amongst cattle as well as the human species. These situations are generally destitute of fresh and living springs of water; the drink of the animals must therefore be contaminated with putrid vegetable matter, and be rendered peculiarly unwholesome.*

The observation that the cows were in good condition and had wintered well, and that no ill conditioned health in the animals had been detected, is no argument against this hypothesis; for I would ask, whether the evil is not generally experienced in such situations and under similar circumstances? And can any of your readers give us instances of the prevalence of the disease on upland districts, where the herbage is short, dry and sweet, the air dry and healthy, and the water pure and ever-flowing? For myself, I have observed that the evil has been alarmingly prevalent amongst dairies where the cattle have been in high condition, upon rich and rank pasturage; and I would venture to ask the Doctor—than whom I know of no one more competent to answer the question—whether, in his professional capacity, he does not much oftener meet with cases of abortion among his rich and luxuriously living patients, than among those who are accustomed to be abroad in wholesome air, and constrained to take exercise, with perhaps spare diet—the evil arising from a too soft and relaxed habit of body? But now to the remedy.

You must know, Messrs. Editors, I am such an advocate for the use of salt, even to profusion, that, to be consistent, I believe I may say I take myself about a pound a week. We know that sheep may be fed with impunity on soils confessedly unsound, if allowed salt in their troughs, and are removed to higher lands for the night; and I have no doubt the evil of abortion might be prevented by such a course of treatment. It is *contemptible* to hear some of our agricultural friends recommend salting their stock once a week! Were I thus to be restricted, I have an idea I should be dead in about that time. Parker, in his Treatise on Salt, says: "A person who kept sixteen farm horses, made the following experiment with seven of them, which had been accustomed to take salt with their food. Lumps of rock salt were placed in their mangers, and these lumps, previously weighed, were examined weekly, to ascertain what quantity had been consumed; and it was repeatedly found that whenever these horses were fed on old hay and grain, they consumed only from 2½ to 3 ounces per day; but when they were fed with new hay, they took 5 ounces per day!" Now cannot we apply the reasoning of these animals to the case in point, and by allowing them as much salt as they require—they being the best judges of how much that ought to be—reduce the catalogue of diseases about one-half; and amongst these, *abortion and the Canada thistle?*

P. S. It is refreshing to see in the pages of the Cultivator, which is in such repute amongst us, an article from this part of the country. Many of my neighbors consider that the publication of a work *so far north*, is out of their latitude: could it not be contrived to bring us nearer together, by the establishment of an office about midway, for receiving communications and transacting the business of a publication confessedly at the head of the agricultural periodical press of the Union?

Newcastle co., Del., 17th July, 1843. D.

THE WHEAT CROP OF WESTERN NEW-YORK.

Messrs. Editors—In the summer of 1842, there was about the same quantity of ground prepared for wheat as there was the previous year. On the 1st of September, many had their fallows ready for seed, and the fine weather induced them to commence seeding the first week of the month. The second week and part of the third were so wet that there was but a small part of the wheat sown till the third and fourth weeks, and then it was unfavorable for seeding; so much so, that in many instances the ground was too wet and heavy for the seed to vegetate. Under these unfavorable circumstances for a crop, cold weather came on earlier than usual, with more snow and more severe cold than had been experienced for many years.

The early sown has been injured by the fly, (Hessian) and choked by the *Shepherd s sprout*, or purse, so much that it is very light. That sown after the rains, was very much thinned for want of root to withstand the hard winter, and in many instances there cannot be half a crop, if the weather should prove favorable. The harvest will be several days later than usual, and it is feared that the rust will affect it; indeed, if all should favor us, we cannot realize much over half a yield. Wheat will be more impure this year than usual; cockle and chess vegetated well last fall, and the thinness of the wheat gave them the advantage. Smut is more common with those who neglected to brine and lime their seed, owing to the unfavorable condition of the ground, it being wet, and sowing impure seed.

The prices of the coming crop, by all that I can learn from the different wheat growing districts in the several states, must rise from the last year's rates; so that the wheat growers of western New-York may get from one dollar to one dollar and twenty-five cents per bushel, if the harvest should come in as well as may be expected from the present prospect; and if the rust should affect it, the price must rise in proportion.

As for the prospect of my experiment field of wheat, my improved Flint surpasses all the other kinds. The Bellevire Talavara (English) has been the most injured by the winter; the Wheatland Red, White Provence, (French) Virginia May, Kentucky White Beard, Mediterranean, and Soules wheat, all have stood the winter very well, compared with the other kinds raised in this vicinity.

The Virginia May, Mediterranean and Wheatland Red are ripening about alike, and will be ready for harvest six or eight days before the other varieties. They will not come up in yield to the improved Flint. The long, stiff beard and thick bran of the Mediterranean, are strong objections to its culture on our fine wheat land. Its early maturity will make it valuable on lands that are late in ripening and subject to rust. My improved Flint is the only kind I shall offer for seed this year, and that at twenty-five cents per bushel above the millers' price. It is very difficult to keep the several kinds in my experiment field pure, and in such quantities as to offer them for seed; but I can supply small samples to those from a distance that should require it. Yours, respectfully, R. Harmon, Jr.

Wheatland, N. Y., July 11, 1843.

RAISING TURKIES.

Messrs. Gaylord & Tucker—I am this year experimenting in raising turkies; or rather I am practicing on a larger scale, in accordance with experiments of former years. If successful this year, I shall feel at liberty to question much that has been said, and some that has been written upon this subject. My method is no secret, yet I prefer to get a little farther "out of the woods," before I say much about it. I have thought, and still think, that one hundred turkies can be raised at much less expense than the same value can be obtained from any other animal on a farm. Writers upon this subject have said much that does not accord with my experience. It has been said (by a correspondent of the Cultivator, I think,) that "young turkies will not follow the hen, do not notice her call," &c., and *such reasons* are confidently set forth as the cause of a failure in raising some young turkies which had been hatched out by a hen. And perhaps some have been deterred from setting turkies' eggs under hens by such communications. But this is all wrong. Turkies not only can be raised by a hen, but in ordinary cases, if we would have them early, they *must* be so raised. If I should "obtain eggs from the wild turkey," I certainly should set them under the hen, as the only *sure*-way of domesticating the young ones; and I should expect they would notice the cluck and the call of the hen as readily as they would the notes of an old turkey. I could state facts to demonstrate this. I can exhibit living witnesses to put this question at rest. But the details would not probably interest the majority of your readers: and yet the details are all that is of much value to one who wishes to try the experiment of setting turkies' eggs under hens. Let me add then in conclusion, that my first eggs this spring were thus disposed of, and they did well. Not one of them thus hatched, has died, and some of them are *full feathered*, and roost upon the fences. They understand the call of the hen too. As an experiment, I took a hen which had just hatched out ten young turkies, and shut her up, and put the young ones to a coop with an old turkey, which I had just taken off with twenty-one young ones. They remained together twenty-four hours, of course over one night. The hen was then let out, and immediately on her going to the coop, ten of the thirty-one left and followed the hen and continued with her. I do not *know* that the ten which left the turkey for the call of the hen, were the *same* taken from her nest, for they were too near like those hatched out by the turkey, for me to detect them. I could state many other experiments, all going to prove that young turkies can be raised by a hen as successfully as with the turkey. But no more upon this subject before thanksgiving. R. L.

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* A dairyman writes: "When I came to the farm which I now hold, I found the stables built under large trees, with a northern aspect. My horses were soon in poor condition, with long and rough coats, and almost always lax in their bowels; nor could I get them up with extra feed or lighter work. But my cows suffered most, for they were always sick; their milk fell off, their butter was poor, and of a bad color and flavor, and *four of them slipped their calves before their time.* On inquiry, I found that the person who had left this farm had always been unfortunate in his horses and cattle, and from that cause, had not been able to make both ends meet. The truth flashed upon me in an instant, and in very little time longer than it has taken me to tell my story, I had commenced pulling down my stables, the unhealthiness of which had been, I was now convinced, the cause of all the evil and all the loss. I erected others on higher ground, removed from standing water and the shade of trees, with a southeast aspect, and dry, capacious yard, and I have had neither sickness or sorrow in my outdoor household from that day to this. My horses live on less food, and are in good condition, and my cows are a credit to their keep. Our butter brings two cents per lb. more in the market, and *no more premature calves.* Instead of watering my cattle, as heretofore, at the pond under the trees—the water cold, with a deadly taste and bad colour—I sunk a well and put in a pump; and at a long trough, under shelter, they slake their thirst, without setting up their coats and shaking all over, as they used to do, even in warm weather, after drinking at the hole under the trees; and to this water, and the bad aspect of the stables, I attribute all the sickness and misery which I once experienced amongst my cattle and horses."

Hartford, Ct., June 20, 1843.

LETTER TO SOLON ROBINSON,

Of Lake C. H., Indiana, in reply to his of March 24th, 1843, by his friend RICHMOND, *of Oakland Farm, Richmond co., and State of New-York, on the difference of farming in the Eastern and Western parts of the United States.*

Dear Sir—The Cultivator for the month of May, 1843, has been received, and your letter (page 81,) has been read with gratification and pleasure. It is to me entirely satisfactory, and answers the queries suggested by my neighbor, as published in the March number of the Albany periodical, where we meet and commune. I take also, as part of your reply, an article in the February number, which I saw after despatching to the editors my communication to you: likewise the information you refer to in the American Agriculturist.

In reply to your friendly answer to my first letter, I will commence by noticing the last paragraph, wherein you complain of me as an anonymous correspondent. I must confess that when writing, I was somewhat apprehensive that you might take it amiss, and not reply; and I accordingly sent my communication to the editors of the Cultivator, with the remark that it was out of no disrespect to them or you, that I did not subscribe my name, and that I wished to be useful without being conspicuous. The information which I desired to elicit, I knew you could furnish; and if given, would be agreeable to me, and satisfactory to many. You have answered, and I thank you for it, in behalf of myself and and other readers of the Cultivator.

When you was making your agricultural tour, I eagerly read your remarks as they appeared in print, and I watched the progress of your journey with the intention, had you come within hailing distance, to have seized you by the hand, and drawn you *here* to the sea shore, where the mighty deep sometimes gently laves our shores, and sometimes in its terrible and majestic fury washes away some of our best lands; *here*, where you would have seen how farmers have to toil to keep their cultivated fields in good heart, by buying or making manure, without which, and plenty of it, our crops will not pay for the expenditures upon them. Hence it is that we manure at the rate of seventeen dollars or more per acre, though your prairie cultivators can hardly believe it, but it is nevertheless true; and the fact has caused me to turn my attention to the subject of making manures, of which I shall give you some account.

Now if ever you come within a reasonable distance of this remote corner of the State of New-York, seek out your friend RICHMOND, and you shall have a hearty welcome: and if he travel westward, he will take the libecty of calling to make himself personally known to Solon Robinson. This latter is by no means improbable, as he has a son residing west of you, in Wiskonsan, which may lead him, though advancing in years, to travel that way.

Methinks I hear you say, and why does my correspondent still keep himself incognito? I answer, because I am past the meridian of life, and am not ambitious of honors or fame. But it is due to you to know something more about your correspondent than his assumed name. I will tell you, then, that I am a farmer of only four years' practice, and any hints or suggestions would not be heeded by old practical agriculturists, if known as coming from a new and a book farmer. Now in a short time, I have made great improvements on my farm, and I raise better crops than some of my neighbors, although they won't believe it, but doubt, though they see it with their own eyes. I was born and brought up in New-York to professional business, where I remained until declining health compelled me to seek a change in the country, which has had a salutary effect. And here, while I live, I wish to make myself useful as far forth as my situation will allow. In the 8th vol. of the Cultivator, p. 65, you will find a communication to the editors, with the real signature of your correspondent: also in the Transactions of the New-York State Agricultural Society for 1842, p. 188, where he is a neighbor to Solon Robinson's communication on the Prairie Culture of Indiana, (p. 221.)

Now I find, by comparing notes, that you western agriculturists raise crops, and large ones, with little labor, and no manure; while we, in this region and farther east, can raise nothing without much labor and high manuring, sometimes even at an expense equal to the value of the land, and often more than the value of the first crop succeeding such application of manure. With us, then, manure is the life of agriculture. Crops well manured will resist the frosts of winter and the drouth of summer better than those poorly manured or without manure. For this purpose, then, we must either buy it or make it. If we buy all that the land requires, the price of our crops will not justify the expense. If we make it ourselves, it requires time, attention and labor, as well as materials and stock. Few are so situated as to be able to make all they want. Hence most of the farmers in this part of the State both buy and make; and some compost their barn yard materials with street dirt and horse manure, which they buy in the city of New-York, and transport by water.

By reference to my manure account, the expenditure stands thus:

Manure and materials for manure bought in N. Y.,	1839,	cost	$207 00
" "	1840,	"	291 35
" "	1841,	"	250 07
" "	1842,	"	331 04
Manure made on farm,	1839, 150 ox cart loads,	valued	75 00
"	1840, 300	"	150 00
"	1841, 612	"	306 00
"	1842, 737	"	368 50
			$1,978 96

Here we have manure bought and made of the value of nineteen hundred and seventy-eight dollars and ninety-six cents, distributed on a farm of one hundred and thirty acres (thirty of which is woodland) in four years, or an average of four hundred and ninety-four dollars and seventy-four cents per annum. To enable me to make the number of loads of manure above stated, sea weed, among other things, has been liberally used. The first year of my residence in this place, (1839,) I was not aware of its importance, and therefore neglected to secure it, as it washed upon my shore.

In 1839, there were collected	42	ox cart loads of sea weed.
1840, "	94	" "
1841, "	167	" "
1842, "	173	" "

This sea weed was employed to litter the barn yards and hog pens. The hogs were kept up the year round, and the pens occasionally cleaned out, and the contents spread over the barn yard, and thus mingled with the droppings of the cattle and the stable manure, which was also spread over the yard as it accumulated. The manure is part of the profit of keeping hogs, and will pay for their keeping. The waste hay, straw, and refuse of the cornstalk fodder which accumulate during the winter in the barn yard, mingling with excrementitious matters, make a mass of animal and vegetable material capable of forming a compost of the best manure. My yards are hollowed to save the liquid part of the manure, and my two barns have gutters to carry off the water, and to prevent the yards becoming too wet. In winter and in stormy weather, my cattle are tied to the racks under cover, and to prevent the stronger from driving the others from their food and into the weather. In the day time, they have the range of the yards, and when the manure accumulates at their stands, it is spread over the surface. Thus, with the use of sea weed, hay, straw, cornstalks and swamp muck, I was enabled in 1842 to make seven hundred and thirty-seven (737) loads of manure, all of which was used to improve and fertilize my lands, in addition to street dirt and fertilizing materials bought, to the amount of $331 04. These materials were *lime, plaster, soda-ash, potash,* crude East India *saltpetre*, (or nitrate of soda,) *ground glass,* (or silicate of potash,) and poudrette.

Now with these facts before you, could your prairie cultivators think it wonderful that we manure at the rate of seventeen or more dollars per acre? I think not. With the same system of management, I shall be enabled this year (1843,) to make more manure than the last, as a way has been cleared to a swamp where I have muck in reserve for use, when the summer heat shall have dried it sufficiently to be entered with a team. The animals which enabled me to make the above amount of manure, were two horses, eighteen hogs, and twen-two head of cattle, large and small.

I was about to give you some account of my use of potash, soda, saltpetre, &c., but the details will make my communication too long and tedious. I will therefore only give you at present some of the results of my manuring.

On one lot of ten acres, marked No. 1 West, on a map of my farm which was made by a surveyor, there was grown in 1839 a good crop of corn; in 1840, a fair crop of oats, after which it was well manured, plowed, harrowed and sown with wheat, and seeded with clover and timothy. In 1841, after the wheat was taken off, the grass came forward so strong, that twenty-two loads of hay were cut and secured from the same lot in September. My neighbors said I would impoverish my land by such cropping. The soil being clay, I gave it a top dressing of sand, and lime and potash. In 1842, two crops of hay were cut from the same field, making together fifty-eight loads, nearly equal to three tons per acre. When the aftermath was gathered, four calves had the run of the field, and in October and November, it received a top dressing of *soda-ash*, partly distributed or sown by hand, and partly mixed with lime and sand, and scattered from the cart with the shovel. And now (the beginning of June, 1843,) the field promises a double crop of hay and grain.

But this, you may say, is only one field, and a partial statement. It is true, I have had some poor crops, where the land has not been so well manured as the above mentioned field. Let us take hay, then, the staple crop of Staten Island, and see what the manure has done:

In 1839, I cut	85	loads of hay
1840, "	44	"
1841, "	120	"
1842, "	233	"

The least quantity was cut in 1840, because, as the grass was running out and the weeds predominating, several of the fields had been plowed to go through a rotation of crops, and again to be brought into grass.

Again: let us see the result of manuring in the total amount of crops, on a farm which cost $12,000:

In 1839, produce of my farm was valued at	$1,556 50
1840, " "	1,984 15
1841, " "	2,522 10
1842, " "	2,576 73

Here you have a statement of increased crops, by an ample quantity of manure, and they ought to have amounted in 1842 to three thousand dollars; but this was prevented by the exceedingly low price of every article of agricultural produce.

Among other means to add fertility to my lands, I save all my wood ashes, burn up all the rubbish about my premises, and the brush about the wood pile, and while burning, throw into the fire bones, clam shells and oyster shells, which are converted into lime and mingled with the ashes, and these ashes are mixed with my compost heaps.

And now if any of your western husbandmen doubt what I stated in my former letter, you here have facts to prove the assertion, both as to labor and manure. We have to be industrious to keep pace with the times. You and I agree in many things, but we differ in this respect: you "plead guilty to a love of indolence." I love to see people work, and work myself, as far as my health and strength will permit. Now on this account, I should make a bad western farmer, as I should be uneasy as a fish out of water while the prairie crops were growing without my looking after them. I should want to be plowing, or hoeing, or making manure, or seeing these things done.

I find myself running into the garrulity of old age, and making my letter too long, and must stop. But a word or two of my neighbor: I read your letter to him, and he joined me in a hearty laugh at its contents, particularly where you balanced the account of the seven acre crop of corn, and where you commented on "seventeen dollars an acre for manuring." Your letter put him in a very good humor, but still he is undecided whether he will take the Cultivator. Accept assurances of respect and esteem from your fellow laborer in the field of agriculture, RICHMOND.

Staten Island, June 5th, 1843

MANURES—INDIAN CORN.

MESSRS. GAYLORD & TUCKER—We have in this section of country, a set of men who pretend to call themselves farmers, with about the same justice as the boot black who styles himself "a leather dresser by profession." Men who let cattle and hogs run in the roads all summer long, and in the winter turn them into the cornfields to browse upon the stalks which are left standing till spring, and then what the cattle have left is raked together and burned. I do not mean to say that there are no exceptions to this class, for we certainly have some good farmers among us, but there are yet far too many of the above breed, and they are very hard to root out. And yet these men are not insensible to the value of manure, for many of them spend large sums annually for stable manure in Philadelphia; but they seem obstinately blind to the fact that they might manufacture as much more at home with scarcely any more labor. I kept six dry cows through last winter, upon nothing but cornstalks and oat straw, cut up together with a machine, and they came out in the spring in the best possible condition; and from those six cows, with three horses and four hogs, I made 75 two horse wagon loads of manure, which having no whole stalks or straw among it, was as easy to spread as compost. I hauled 60 loads of this upon three acres of clover land for corn, and some of my neighbors (of the abovementioned class,) told me it was a clear waste to put so much manure upon so little land. Their practice is to put no manure on their cornfields, which generally contain from 12 to 40 acres, and 25 to 30 bushels per acre is considered a fair crop. I told them I thought it better policy to put out one dollar at six per cent, than six dollars at one per cent.

Having seen a difference of opinion in some of the the back numbers of your paper, as to the best mode of applying manure, I determined to try some experiments for myself. Part of the field therefore was manured, and then plowed under immediately, and part was plowed first; the manure then spread and harrowed in; and then the whole field was rolled and struck out in rows three and a half feet apart. A small piece was left without manure, and dressed with unleached ashes. I ought to mention that the land was a light sandy loam, and had been sowed with plaster in February, in order to give as good a start as possible to the clover. Having been much annoyed last year by the black birds, I adopted the plan recommended in various nos. of the Cultivator, of tarring my seed corn. It was soaked 24 hours in hot water, then tarred with a pint of tar to a bushel of corn, rolled in plaster, and planted seven kernels in a hill, intending to thin it to three stalks. The hills were made two feet apart in the rows. More than a week elapsed before I visited the field after it was planted, yet I found no sign of vegetation, and on examining the hills I found only here and there a weak sprout, but almost every kernel rotting. I was not a little disappointed at this result, having been exceedingly careful the preceding fall in saving the best ears for seed, so that it was unlikely that I could find as much more equally good, and moreover I was so driven with work that I could ill spare the time for replanting. However, regrets were useless, so I picked out the best seed I could find in my corn crib, soaked it 24 hours, and then planted it between the hills which were first made. It came up finely, and now looks as well as any about here, though it was planted much later than is usual. I can account for the failure of the first seed only by charging it to the tar, and yet the utility and safety of that application has been vouched for by more than one good farmer, in the pages of the Cultivator. It may be as well to let your readers know that in one instance at least, it has proved ruinous. If the results of my experiments in manuring will be of any value, I shall be happy to communicate them after harvesting my crop. At present, I see no difference in the appearance of the corn, except that which was dressed with ashes, which is not quite as large as the rest.

I would not have you suppose that I considered 75 loads of manure a large amount to make with the number of animals I kept. Owing to the wet season last year, I was unable to get any swamp muck, and the only additions I could make to the contents of my barn yard, were such refuse vegetable matter as I could collect, and the straw and stalks which were daily cleaned from the stables. In the spring, I had several tons of oat straw and a large stack of stalks remaining, the first of which I have spread in my barnyard and covered with muck, on which to yard my cattle next winter, while the stalks have been made into a compost heap, by mixing in alternate layers with swamp muck and lime.

You can best judge whether any thing I have said is worthy a place in your paper. If so, I shall be pleased to reflect that I have contributed my mite to the treasury of instruction to which I feel myself so much indebted.

Truly yours, H. W. S. C.

Oatlands, Burlington, N. J., July 12, 1843.

BARNABY & MOOERS' PATENT SIDE HILL AND LEVEL LAND PLOW.

Messrs. Gaylord & Tucker—Permit me to call the attention of the farming community to the above implement. In my opinion, it possesses many advantages over any other plow in use. I have long thought that a majority of the plows in this section might be very materially improved in their construction, so as to run with more ease for a team, and be held without fatiguing the plowman, and thereby performing the work with more expedition and to much better advantage than is most usually done. Early in the spring of 1842, I sent to Mr. Mooers for one of his plows, intending to use it in breaking up some old pastures for spring crops. Owing to some delay in its transportation, it did not arrive here until late in June following, and consequently I had no opportunity of judging of its merits until last fall, when I broke up with it about twenty acres of greensward. The soil was a stiff clay, and had been used for sheep pasture twenty-one years in succession. When I commenced, I put on a very strong and heavy span of horses, and hitched another horse on forward, with a boy to ride, supposing that it would of course be a heavy draft for the three, as the severe and unprecedented drouth of the previous summer had rendered the ground unusually hard. After I had plowed the first land, I dismissed the boy and the third horse, being absolutely astonished at the perfect ease and celerity, as it were, with which the plow glided through the ground. Nor was I less surprised than pleased at the excellence of the work done. Instead of crowding the furrows out one side, and leaving them standing on their edges, (as our best plows always do,) they were so completely inverted as to not leave a single blade of grass visible between them. The furrows run off from the mold board with such perfect ease and precision, that there is scarcely a break in them from one end of the field to the other, and the land is left in the most admirable order for the seed, being quite mellow on top, and not *trowelled* down by the mold board in the least degree. I could finish my two acres a day with all ease, with only one span of horses. The past spring, I put the same span of horses on to a "Vergennes plow," so called, the best we have in this vicinity, and a much lighter span on to my "Mooers' plow," and went to breaking up another clay pasture. My hired man took the first, and myself the last, and the way I "whipped out" the big team, with my new plow and small horses, was a caution. Indeed, I am convinced that I can do more and far better work, with one-third less team on this plow, than with any other plow I ever saw; and I would earnestly invite the farming community to procure the plows, and satisfy themselves of their great utility and preference over all others.

I would here suggest to Mr. Mooers the propriety of making an improvement in the handle of his plow. In the first place, they are set rather *too low* for a man like me, whose head is elevated somewhat over six feet in the world, and who is not inclined to stoop much to things of earth. There is nothing I abhor more in farming, than to see a plowman bending over his plow, pushing and crowding his team before him, his legs hanging back and dragging after him, as if too lazy to keep up. Let him stand up straight between the handles, with head erect, cheering on his team with spirit and animation, and then there is no nobler sight seen. Mr. Mooers would also do well to turn the ends of his handles *out*, so that they will not hit against the plowman's legs as he walks. Yours truly,

Chimney Point, Vt., July 1, 1843. D. C. Goodale.

SOWING CLOVER IN AUTUMN.

Messrs. Editors—You may perhaps recollect that I was at your office in August, 1841, and made some inquiries with regard to sowing clover in the fall of the year, on dry sandy soils, and mentioned I had a field containing 22 acres, sandy soil, which I intended to try by way of experiment. I applied 100 loads of barnyard manure and plowed it in the spring of 1840, and planted it with corn; yielded from 30 to 40 bushels per acre. Next spring sowed it with oats; had a middling crop. I applied 100 loads more of barnyard manure after oat harvest, and plowed it under and sowed the field with wheat and rye; after harrowing in the grain, I sowed clover and timothy seed, and went over the field with a bush, and I have now a fine field of clover and timothy, large enough to mow. I think it will do well to sow clover seed early in the fall, on dry sandy soil, if a little manure is applied previous to sowing, as I have frequently known it to fail when sown in the spring.

John R. Blair.

Kent, Ct., June 28, 1843.

SHEEP RACKS.

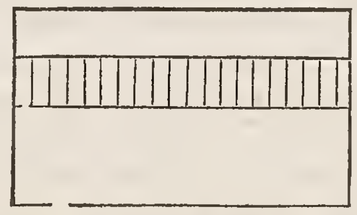
Messrs. Gaylord & Tucker—A writer in the Cultivator for June, 1842, N. Titus of Ohio, says:—"With regard to hay seed and dust, they will get more or less in the wool, on the head and neck; and so they will if fed in board boxes or in racks, or in any way that I am acquainted with, except feeding on the ground." The above assertions put me in mind that I had better communicate, perhaps, my plan, as I wish the best plan to be adopted by my brother farmers; and if any one has, or can improve upon it, I for one certainly will be thankful.

Ten years ago, I planned and built for myself a sheep barn, as I call it, thirty-two feet long and thirty wide, with a rack the whole length on each side; a two inch plank floor over the whole, six feet between joints; a double boarded floor over head, to keep seed and dust from the sheep. I put in studs at an angle, for the frame of the rack; one foot from the floor I put in a two inch plank, 13 inches wide, (the covering of the building made the back side of the rack;) near the center of the plank, in a line, bored three-quarter inch holes, one inch deep. I did the same in the edge of a thick board, four inches apart; cut the rack sticks twelve inches long, about one inch through; inserted one end in the plank, the other in the edge of the board; slipped it down and fastened it; boarded up above, tight to upper floor. I guessed they would stay there. Ten years' use since, by from forty to one hundred sheep, has not displaced one of them. No dust or seed gets in the wool on the head or neck of the sheep.

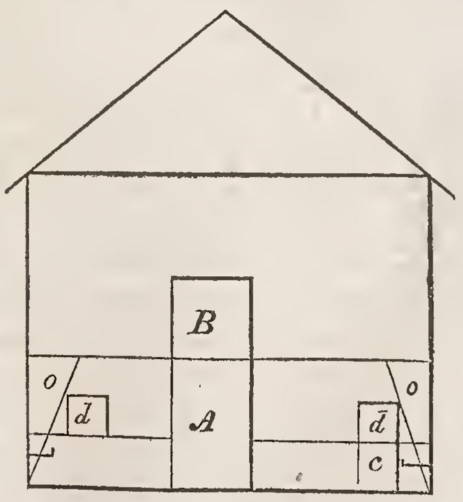
The manure is all under shelter till wanted; the building is boarded up and down, which leaves some cracks, and four windows, two in each end, sufficiently ventilates it. It contains plenty of room over head to contain all the fodder for the sheep the building will accommodate. The rack is six inches wide at the bottom, and two feet six inches at the top; a strip of board, four inches wide, nailed on the outer edge of the plank, makes a very good manger to feed either grain or salt in. No objection can be made to six inches wide at the bottom, as every farmer knows that in taking the hay from a mow, it can be as readily put in edgewise as any other.

It appears to me that a very cheap rack can be made on this plan, to place near a barn or stack; only make it double, and the sheep can eat out of both sides of it.

The barn being built on a division of two lots, I have two doors for the sheep to enter—one at each end. The sheep do well then; one door is left open all winter, and the sheep will as readily go out and in as a man will go out to take exercise and air, or return to get away from the cold and storms.



Front view of Rack and Manger, (Fig. 61.)—The space above the rack to be boarded up.



End view of Sheep Barn, (Fig 62..)—*A.* door to enter, take out manure, &c.—*B.* door to put in fodder—*c.* two slip doors for sheep to go in and out, in either lot, being built on division, one on each end—*d.* four slip windows, two on each end, to open or shut at pleasure—*o. o.* rack and manger.

Very respectfully yours, John Beach.

Eastkill, N. Y., 1843.

FORK FOUND IN THE STOMACH OF A COW.

Messrs. Gaylord & Tucker—In December last, Mr. Martin Bishop, near this town, slaughtered a cow, in whose stomach was found a common two pronged table fork. Regarding the circumstance as unusual, I requested Mr. Bishop to give me some account of it for publication. A few days since, I received from him the fork referred to, together with a part of the *sternum*, or breast bone, into which it had penetrated. The fork was probably swallowed by the cow while drinking slop from the kitchen. How long it had been in the stomach, is uncertain; but there is no doubt that it would soon have made its way through the body of the animal, which it is likely would have been done without occasioning any farther inconvenience than had already been experienced. From appearances, it would seem that the prongs of the fork first pierced that part of the stomach lying near the posterior termination of the sternum: that the stomach had become firmly attached to the sternum, so that there was no possibility of its contents passing out at the aperture made by the fork; and that the fork had not only passed through the stomach, but nearly through the bone which had opposed its progress. It had entered the sternum at a point between the two last ribs which are attached to it, and had worked in so far, that the points of the prongs had nearly protruded on the opposite side. That part of the stomach around the fork had assumed the form of a tube, resembling, in the language of Mr. Bishop, "a speaking trumpet," the small end attached to the sternum.

I subjoin a brief note from Mr. Bishop, which, with what has been said, exhibits the principal facts of the case. These facts are certainly worthy of preservation, as showing the wonderful economy of nature in preserving her works from injury. S. H.

Zanesville, O., March, 1843.

"Mr. Howard—The fork and bone which I send you, were taken from a cow which I slaughtered on the 9th of December last. This cow was dried off on or about the middle of September, but not without much difficulty, so great was the flow of milk. The pasture in which she ran was good, and I did not commence feeding her until November, and then only once a day, with corn in the ear. In this way she was fed through November, or until within a week of killing her. The last week of feeding, she was put in a stable, and her feed and water given regularly, three times a day, she continuing to eat large and full meals to the last.

While this cow was living, there was no appearance of disease, except an occasional stiffness in her limbs, but then only in case of her being exposed to cold storms. I can give you no definite idea when this cow could have taken the fork into the stomach; but from all I can learn, it could not have been later than March last, (1842.) The fork, you will perceive, is in a good state of preservation. Respectfully yours,

M. Bishop."

EXPERIMENT WHEAT.

Messrs. Editors—Five years ago last March, I sowed a bushel of white handsome winter wheat; it came up and grew, spreading over the ground like a mat; the seed stalks sprang up, but very scatteringly. The produce was half a bushel of badly shrunk wheat. The next spring I sowed, in April, a peck of the best of it: it grew very much as it did the first year; produce, two quarts. The third season, sowed again in April, which grew naturally, like spring wheat; produce, twelve quarts of plump wheat. The fourth year, I did not sow until the middle of May; produce, two bushels of shrunk wheat, which I attribute to late sowing. Fifth year, sowed the two bushels on one acre of ground, April 15th; had the satisfaction of harvesting twenty-seven bushels of handsome, plump wheat. I like the wheat so well, that I have this season sowed eighteen bushels of it. I think it bids fair to be a valuable addition to the wheat family. S. Peck.

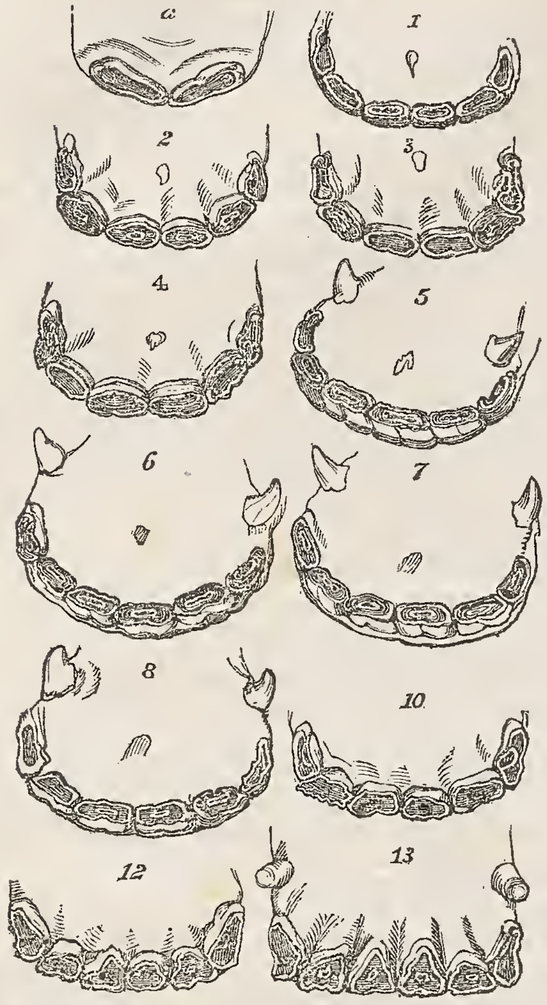
Cazenovia, N. Y., June 26, 1843.

Rotary Knitting Loom.—Mr. Arsamus French of Springfield, Mass., has, after much labor and study, invented a machine which knits stockings and hosiery of all kinds, of perfect shape, without seam or blemish, with a rapidity and cheapness unparalleled. Each machine, (says Mr. George Darracott,) will knit one sock per hour, while one girl can easily tend ten machines, and five hundred machines may be driven by one horse power. Rev. John Pierpont declares it is the greatest mechanical invention of the age. Unlike the clumsy and cumbrous stocking machines of former days, it weighs but three pounds, and may be placed on the centre table of a lady's drawing room. It will knit cotton, woolen, silk, or any fabric, from the finest to the coarsest.—*Ex. paper*.

Extraordinary Yield of Corn.—Mr. Thurston Wood, of Madison county, Indiana, raised from a single grain of corn, last year, nine ears, all sound and good: when shelled, it measured two quarts and nearly half a pint, which contained 4,363 grains.

Swedish Proverbs.—Laziness is the devil's cushion.—Peace cherished is strife banished.—A little cloud can hide both sun and moon.—Unpunished crime only induces to still further crime; bitter must be atoned for by bitter.

Veterinary Department.



The figures above show the appearance of the teeth of the horse, each year, from the time of the appearance of his foal teeth, marked (*a*,) to 1, 2, 3, 4, 5, 6, 7, 8, 10, 12 and 18 years.

AGE OF ANIMALS.

As the value of most domestic animals is in a great measure depending on their age, considerable attention has been given to the best and most certain modes of determining this point. The modes adopted for the several domesticated ones are different, but up to certain periods are such as to determine the age with great accuracy; after which, there are no positive indications, except such as are more or less general, and therefore vague. Mr. Blaine, in his Encyclopedia of Rural Sports, and Mr. Youatt, in his several works on British animals, are authorities which are considered as the standard ones on matters relating to animals.

The age of sheep is known by their having, in their second year, two broad teeth; in their third year, four broad teeth; in their fourth year, six broad teeth; and in their fifth year, eight broad teeth before. After this, while the teeth remain in the head, they afford little certain indication of the animal's age. At the end of one year, young sheep lose the two fore teeth of the lower jaw; at eighteen months, the two teeth joining to the former fall out; and at three years, being all replaced, they are even and white. The ages of all horned sheep may be known by their horns, which show a ring annually to the end of their lives.

The ages of cattle can be determined by the teeth and horns. At the end of two years, they shed their first fore teeth. These are replaced by others larger, but not so white. Before they are five years old, all the incisive teeth are thus shed and renewed. As the animal grows older, the teeth wear down, become unequal and black. Horns are shed at the end of three years, and they are replaced by other horns, which, like the second teeth, always remain. The first year of the new horn, that is, the fourth of the animal's age, a kind of button or ring forms around the base, or near the head. The following year, this button or ring moves from the head, being lengthened by a fresh course of horn between that and the head, and this is also terminated by a button or ring; and in this manner the horns continue to advance or grow as long as the animal lives. Thus the age is easily determined by these rings, counting three for the first, and one for each successive one. Deception is sometimes practiced by filing, scraping, and oiling the horn, so as to eradicate the rings or indications of age.

There is more difficulty in determining the age of the horse than either the sheep or the ox, though up to a certain age, the mouth of the horse, or his teeth, may be relied upon with much certainty. The changes which take place in the teeth, and the time of their appearance, fix his age until he is eight years old, after which, little can be known by them; hence jockeys or horse dealers rarely have horses over eight years of age. The first teeth which appear are the *foal teeth*, as they are called. These begin to show themselves a few days or weeks after foaling, and at the end of two months, the two center teeth, or nippers, will have reached their natural level, as shown in the cut, fig. *a*. The teeth continue to successively appear, until forty make their appearance, and become permanent. Of these, twenty-four are double teeth, or grinders, four tushes, and twelve front teeth, or nippers. Between the second and third month, the second pair of nippers or incissors will have overtaken the first: and between the sixth and ninth month, another pair will show themselves, thus completing the *colt's mouth*, or making six above and six below. These teeth, in all their stages, are covered with an exceeding hard substance, called enamel. This substance covers the outside of the tooth, above the gum, and, as designed to prevent the tooth from wear, it rises on every side, and seems to fold over and fall towards the center. As the enamel does not meet, a cavity is left, which, owing to food, is kept black or discolored, and it is from the appearance of this mark, and the wearing down of the enamel, that the age is principally determined. "At the age of one and a half years, the mark in the central nippers will be much shorter and fainter; that in the two other pairs will have undergone an evident change, and the nippers will be flat."—(Youatt on the Age of the Horse.)

When the colt is about two and a half years old, the four central nippers (two above and two below,) are shed, although in some few cases these teeth remain till the colt is near three years old. These new teeth are readily distinguished from the first or foal teeth, by being much stronger, and twice their size. "When horses have got these four teeth complete, they are reckoned to be three years old."—(Blaine.) When they are about three and a half, or in the spring before they are four years old, the horse loses four more of his foal teeth, one on each side of those first cast; so that if you see in a horse's mouth the two middle teeth full grown, and none of the foal teeth except the common teeth remaining, you may conclude that he is four that year in April or May. "At three years old, the horse ought to have the central prominent nippers growing—the other two pairs wasting—six grinders in each jaw, above and below—the first and fifth molars level with the others, and the sixth protruding."—(Youatt.)

The tushes, of which the horse has four, two in each jaw, above and below, appear about the same time with the last mentioned teeth, or when the horse is about four years old, and dealers who are anxious to have the horse appear older than he actually is, endeavor to facilitate their growth by deep incisions in the gums, so as to remove all obstructions. One of the surest marks to know a four year old horse is by his tushes, which are then small, and sharp on the top and edges.

At the age of four and a half years, or rather in the spring before he is five, the last distinctly marked change takes place in the mouth of the horse. The corner teeth, or last pair of nippers, are now the most to be noticed. The central nippers come to their growth quickly, or in less than three weeks; but these grow more slowly, and are seldom much above the gums till the horse is full five. They differ also from the other teeth, in somewhat resembling a shell, and hence some call them shell teeth, and because they encircle the flesh in the middle, half way round; but as they grow, the flesh disappears, and a distinct hollow or open place appears on the inside of the tooth. "Where a horse is full five, these teeth are about the thickness of a crown piece above the gum; from five to five and a half they will grow about a quarter of an inch high, or more; and when a horse is full six, they will be near half an inch, and in some large horses a full half inch above the gums."—(Blaine.) At the age of six years, or perhaps a few months before, the horse may be said to have a *perfect mouth;* all the teeth are produced, fully grown, and have as yet received no material injury or change from use.

When the horse has reached the age of seven years, the central mark, or hollow in the teeth, has been worn away from the four central nippers, and is fast wearing away in the corner teeth, while the tushes are changed by growing round at the point, and rounded at the edges. At eight years old, the mark is said to be out of the mouth, as in most cases it is worn from all the bottom nippers; and from this time, says Mr. Youatt, "there is nothing that can clearly show the age of the horse, or justify the most experienced examiner in giving a positive opinion." Dishonest dealers sometimes endeavor to make the horse appear older than he is, by pulling out the foal teeth before their time; but this may be detected by an examination of the tushes, for if the corner or last set of the nippers come in some months before the tushes rise in the gums, it may be reasonably suspected that the foal teeth have been pulled at three years old. So when a horse is past eight years, and the marks are worn out, such dealers have a practice of cutting out, with a graving tool, the central portion of the tooth, which hole is afterwards burned with a hot iron, and thus permanently discolored. By such rascalities, many have been imposed upon, and the name of horse dealer brought into contempt.

After a horse has passed his eighth year, little can be known by his mouth, though experienced observers may find indications to assist them in arriving at the truth. There are gradual changes taking place in the appearance of the teeth, and in the exterior of the animal, that mark the advances of age. Blaine says:—"When a horse comes to be very old, it may be discovered by several indications, the constant attendants of age; such as his gums wearing away insensibly, leaving the teeth long and naked at the roots; the teeth growing yellow, or rather brownish at the same time. In an old horse, the bars of the mouth, which in a young horse are fleshy and form distinct ridges, are lean, dry, and have little or no rising. The eye-pits in a young horse are generally filled up with flesh, look plump and smooth; in an old horse, they are sunk and hollow, and make him look ghastly. There are also other marks which discover a horse to be old, as grey horses turning white, and many of them being all over flea-bitten except their joints. These changes, however, come sooner or later, according to constitution, color, &c. Black horses are apt to grow grey over their eye-brows, and very often over a large part of their faces. Old horses always sink more or less in their backs, and some that are naturally long backed grow so hollow with age as to be unfit for the saddle."

Farmers and others who purchase a horse for work, we think make mistakes frequently as to the most profitable age, when severe or continued service is required. Many who wished to purchase, would choose one of four years old; but we are convinced that a horse that is sound and has been well treated, will do more work between six and twelve than in any other six years of his life. At that age, he is in his prime for vigor and strength; his muscles have acquired firmness and maturity; and his bones being compact and solid, are not liable to become displaced or deformed from exertion—a result very common, when put to hard work at an earlier age.

GAPES IN CHICKENS.

MESSRS. GAYLORD & TUCKER—Can you furnish me through the medium of the Cultivator, with a cure for the gapes in chickens. I have tried soap, assafœtida, spirits of turpentine, &c. but without success. Three-fourths of my chickens are dying with this disease. It appears to be produced by small worms in the throat.

Whalen's Store, June 30, 1843. SETH WHALEN.

As a preventive is said to be better than a cure, we will first give one pronounced by Maj. Chandler, in the Tennessee Agriculturist, to be infallible. The simple nature of the prescription should not prevent a trial. "Keep iron standing in vinegar, and put a little of the liquid in the food every few days. Chickens so fed are secure from the gapes."

For a cure, freeing the throat from the worms spoken of by Mr. W. will be effectual. This is easily done by a feather, say one from a hen's wing. This is to be stripped of the feather, with the exception of about an inch at the end, which is to be turned back from the point, which should be rolled a little. The chicken is to be caught and firmly held with his neck straight and bill open, by another person. Wet the end of the feather, and introduce it into the windpipe, the opening of of which will be seen when the animal breathes. Push it down slowly some two or three inches, and then draw it out, turning the feather as you do so. Usually the worms will adhere to the feather, or be loosened so that the chicken will sneeze them up. A second operation may sometimes be necessary, rarely more, to make the cure perfect. The feather should be wet before it is put down the throat, and perhaps spirits of turpentine might do well for this purpose, and might aid in the destruction of the worms. The turning of the feather, however, appears to be the main thing. Boswell, in his Poultry Yard, recommends a pepper corn in dough occasionally, washing the head and throat in camphorated spirit or brandy and water, and giving sulphur in their drink. We should, however, have more confidence in the feather than any thing else, and think when skillfully used it will rarely fail to cure.

LAMENESS IN THE HORSE.

MESSRS. EDITORS—I have a young filly that I raised, that has been lame for some time, and her right hip has perished as does the shoulder in the disease called swaney or swiney. I should be glad to learn from you a remedy; or whether the swiney is ever known in the hip. JACOB MILLER.

Caneyville, Ky., 1843.

We have never seen a case similar to the one described by our correspondent, and the veterinary works are silent on the subject; consequently are unable to give the information he solicits. If any of our friends are acquainted with the complaint and its cure, they will oblige us by communicating such knowledge for publication.

TO WASH WOOLEN GOODS.—The art of washing woolen goods so as to prevent them from shrinking, is one of the desiderata in domestic economy worthy of being recorded, and it is therefore with satisfaction that we explain this simple process to our readers. All descriptions of woolen goods should be washed in very hot water with soap, and as soon as the article *is* cleansed, immerse it in cold water; let it then be wrung and hung up to dry.—*Ex. paper.*

MARKING INK.—Take six and a quarter cents worth of Lunar caustic, and having put it into an ounce vial full of vinegar, cork it tight and hang it in the sun. In a couple of days it will be fit for use.

To make the preparation for the above, take a lump of pearlash of the size of a chestnut and dissolve it in a gill of rain water.

The part of the muslin to be written upon, is to be wet with the preparation, and dried and glazed with a warm flat iron; immediately after which, it is ready for marking.—*Louisville Journal.*

The Garden and the Orchard.

CULTURE OF FLOWERS.

We hail with pleasure every indication of increased attention to the architecture of our dwellings, combining elegance and simplicity of structure, with convenience and comfort in use; every proof of increasing taste in the arrangement and disposition of the farm buildings, every new addition made to the orchard or fruit garden, as a fresh contribution to the happiness of the owner; nor do we view with less satisfaction the evident impulse which the culture of flowers has received within a few years. It is true the selection and arrangement may not always be in the best taste; but a great point has been gained, the culture has commenced, and time and experience will correct the minor difficulties that beset the way of the lover of flowers. It is but a few years since flowering shrubs and plants were a rarity, unless indeed some of the most common kinds, such as the rose or the pink. Now, mingled with these, may be found the dahlia, honeysuckle, hydrangeas, tulips, and the multitude of other beautiful flowers which have been introduced and acclimated among us, to meet the demand which an improved and cultivated taste in these matters has created.

We repeat that we hail with pleasure the indications that meet us every where, that the culture of flowers is increasing; that the fair hands of American wives and daughters find a pleasure in planting, watering, and training those choice productions of nature; and that the farmer in his yards, finds flowers instead of grass or weeds, while the daily replenished flower pot of the sitting room, gladdens the senses and causes the fatigue of the field to be half forgotten in its beauty and perfume. All these are indications of good; of multiplied rational enjoyments; of increased domestic comforts and happiness; of a less ardent hankering after wealth alone; and of an improved and more refined taste.

It is true we may here be met with a cold calculating *cui bono?* What good will the culture of flowers do? Will they add to our food or raiment? Will they increase our wealth? Will they be meat and drink to us? If not, what are they good for, and why recommend their culture? We answer, because that eating and drinking, and wealth, and fine apparel, are not the only, or indeed the most common means of happiness, and in themselves are very far from constituting the great end and aim of human existence; because the observer of nature is insensibly and almost necessarily led to "look through nature up to nature's God;" because the presence of the beautiful in nature has a tendency to elevate and refine the mind; and because the contemplation of beautiful objects has a more controlling and enduring influence on the character and destiny of man from his earliest to his latest hour, than almost any other influence that can be brought to bear upon them. Every thing that has a tendency to make home delightful, that strengthens the social affections, that betokens and inculcates purity and neatness, that furnishes incentives to industry, that gives rational and innocent amusement, while it adds to our stock of useful knowledge, is surely deserving of commendation and adoption. The culture of flowers does all these things, and more, and are they to be cast aside as nothing worth?

We trust there is not a farmer in the state, we do not believe there is one, but would feel better pleased to find his humble cottage windows shaded with the climbing or Michigan rose, his porch covered with the neatly trained honeysuckle, his limited yard filled with shrubbery and flowers, among which his children are playing, and in tending which the elder ones find a pleasing employment, than to come from his daily toil to find his house and yards naked and unornamented, his children dirty from playing in the street, and his wife and daughters spinning street yarn, or retailing scandal. Will not these widely contrasting influences have a corresponding effect on the man—on the whole family? There is another reason why we love to witness the extension of flower culture. It is because it is principally conducted by women, and nothing can more contribute to their health, their spirits, and their general welfare, than some interesting employment, that shall keep them more in the pure air, and give that exercise so essential to the human constitution. If American women would spend an hour or two daily in their gardens or yards, tending their flowers, planting, training, weeding, far, far better would it be for them than the indulgence of those sedentary habits which take the lead in the long train of causes which are annually consigning to a premature grave so many of the young and beautiful of our country. Let every one then cultivate flowers. They require little space, they furnish a necessary and a tasteful employment, they cost comparatively nothing, and they contribute much to the happiness which forms the grand object of pursuit with all.

A NEW ENEMY OF THE APPLE TREE.

We perceive from a letter of Dr. Harris, published in a late number of the Mass. Plowman, that the insect which has caused such serious losses to the growers of the pear, by producing the disease called the *fire blight*, has attacked the apple tree, and promises, where undisturbed, to destroy them as effectually as it does the pear tree. This insect is a small beetle, called the *Scolytus pyri*, one-tenth of an inch long, and of a deep brown color. It deposits its egg in the buds, from the roots of which the worm or grub penetrates towards the pith of the branch, around which it passes, making a circular burrow between the bark and the pith, thus cutting off the circulation of the sap, and giving to the branches that withered, blighted appearance, from which the common name of the disease is derived. The remedy is to cut off the branch *below* the part injured, and burning it before the insect has left it. To secure this object, and experience proves that it will be successful when promptly and fully carried out, the branch must be cut off as soon as the leaves begin to wither, and sufficiently low to ensure the destruction of all the worm eaten buds. This course has saved the pear in many orchards, and there is no doubt it will be equally successful with the apple, should the attacks of this insect become generally extended to that tree.

MANAGEMENT OF FRUIT TREES.

Messrs. Editors—The article in the June number of the present vol. of your paper, headed the Peach tree, requires some notice, and probably a much more extended one than my time will admit of at present. In the first place, allow me to say that the disease of the peach tree called and known as the yellows, is not contagious, and I will hold myself ready to prove, not theoretically or speculatively, but practically, that there is no such thing as a healthy peach tree being infected by another, standing adjacent and having the yellows. I will not say that this or any other disease cannot be inoculated; but if it can, I have not been able to do it in several experiments made for the purpose.

I will endeavor to detail some of my experiments and observations in regard to the yellows, &c., and believe that I can show it to be the result of error in their culture. This farm had upon it in 1836, a small apple orchard, the trees standing at distances of 32 feet; between the rows of apple trees, peach trees were planted, at distances of 16 feet, tree from tree. The peach trees were in a very unhealthy condition, some of them being in the last stage of the disease called the yellows, ceased to live after that year; others not so bad, but having the disease in its worst form, (every part of the tree being affected,) received my care and attention. My first desire was to get rid of the peach worm, which I readily accomplished by the use of salt and saltpetre around the trunks of the trees, &c., and at the same time I gave to those trees producing good fruit, a top dressing of manure. In 1838-39, my orchard was entirely free from the worm, and appeared in a healthy condition, with the loss of only 3 trees out of about 40 that had the yellows.

The orchard being in good health, I resolved to test my then theoretical views; having planted a few trees to supply me with fruit in case these should be destroyed, I went more cheerfully to work and selected eight trees standing in a row, and had the ground manured for about 10 or 12 feet on each side of the row of trees; it was then plowed and potatoes were planted in every third furrow, this furrow receiving an additional quantity of manure. The balance of the orchard was plowed during the month of September; a part thereof received a dressing of manure and was plowed in; another part was manured after being plowed, and a third part without manure; the whole orchard was sown with wheat, and the following spring with clover. The effect was that a large majority of the peach trees showed some symptoms of disease, but more perceptible on those where there was no manure, where the manure was turned under and where the potatoes were planted. Of the 8 trees where the potatoes were planted, I was resolved on saving 4 of them if possible, for here I thought the greatest amount of injury was done, (though I have thought differently upon this subject since,) yet in this case the injury met my fullest expectation, and the 4 trees unattended to had the yellows and were about to die, when Mr. J. L. McKnight and a friend of his, both living in or near Bordentown, N. J., and both peach growers, came to see my orchard; these gentlemen pointing to three of these trees, asked if I could cure them; I told them it might be possible, but they were very far gone; their remark was that they thought these trees could not be restored to health. The middle one of these 3 trees being most diseased, was selected by me to be cured, and if Mr. McKnight and his friend will call and see me in September next, I will promise to give them some perfectly sound fruit, to be gathered from this tree, though the fruit is not of a very good kind. The other two trees died for want of attention, and were cut down this spring. Now this is one instance, of which I have ample testimony, of this disease being curable; though it is not the first instance of cure with me by very many. The disease was produced by the plow, and the cure by rest, with a top dressing of stable manure and ashes.

I deem it unnecessary to say any thing more about my orchard at present, but beg your indulgence to permit me to ask attention to the effect produced from plowing orchards. A person living within 2 miles of me, has an apple orchard that was to within the last 3 years, a most prolific orchard, but in consequence of some of the trees putting on the appearance of decay, he thought that to manure it and plow it would be of service; this he did three years ago, and the orchard producing no fruit the next year, and the trees appearing more unhealthy, he manured and plowed again; but still he has no fruit, and his trees are growing worse instead of better. Another person about 7 miles distant, has an apple orchard that he had worked in corn three years ago; one of his people being at my house the year following, I inquired if there was any fruit on the trees: "No! the frost has killed all the apples." I then asked him about trees standing in different parts of the orchard, where I knew they could not plow, and was told that these trees were full of fruit, and that the "frost did not hurt them." I desired him to say, the next time he was asked why these trees were full of fruit and the others not, that they could not injure them with the plow. I could give very many instances of this kind, but my object being to call attention to this matter, I will ask every one to make his own observations and comparisons; let every farmer look into his neighbor's orchard and his own, and see what the effect of plowing is when compared with the unplowed orchard adjacent to that plowed; let him call to recollection the fine orchard planted by his father, that is going into decay, and ask himself the cause, and he will receive more knowledge upon this subject than could be derived from volumes written upon orchards—though I would strongly recommend the perusal of all works written upon the subject of our business; the avocations of life are always promoted by a proper and strict inquiry after truth, and no agent should be neglected to the advancement of so desirable an end.

My system is to work a tree just as I do the corn plant; the one as an annual, the other as a perennial; give the tree all the cultivation it is to have while young, and before a set of organs are wanted for the perdurable formation of fruit, and when the tree puts on the appearance of premature decay, I give to it a coat of manure spread upon the surface of the ground: this I apply in the fall of the year, always preferring long to short manure, and when ashes are deemed necessary I have put them on in the spring.

Shall I say a word here about peach trees 30 or 40 years ago, which Mr. Downing represents to have grown any where in the United States, south of the 43° of latitude. Well, 40 years ago there was but little demand for peaches as a market fruit, and they were for the most part converted into pork and brandy. For these purposes, it did not answer at that period of time, to pick them off the trees by hand, but a neat grass lay was considered as indispensable to facilitate their collection, as step ladders are at the present day. The peaches then were shook off the trees, and the best selected, either for drying or for the still, and the hogs disposed of the balance.

There were several reasons why orchards were not destroyed at that time by tillage, and perhaps the most prominent one was that a grain crop in the orchard would prevent or retard the gathering of the peaches, which by the by, were worth more than any grain crop that could be grown in the orchard; but whenever an old peach orchard was plowed a few times, a new one had to be planted, or at least such was the case 30 years ago, on some farms, to my certain knowledge. I do not wish to be understood that the peach tree can be grown at the present time with the same facility it could then, for I have no doubt that the pabulum necessary for the support of this tree, has become in a great measure exhausted from the soil—but I presume it can be restored—if so, we must get "the neighbors" to resuscitate their soils and to form a good stock by proper tillage; but when the trees come into full bearing, we must then feel satisfied with whatever nature may be pleased to do in the premises, for any stirring of the soil after this period of growth is obtained, has a tendency to bring the orchard into decay, of which I can show hundreds of surviving witnesses.

A careful inquiry will show that the peach tree began to decline about the close of our last war with England; grain commanding a very high price at that time, peaches were only considered in a secondary point of view, and orchards that probably had not been disturbed with the plow for 15 or 20 years previous, were then put in wheat, corn, &c. This soon brought the orchard into decay, and in many instances they were not replaced; and when replanted, they have been treated very differently from the original. We must now have a crop of grain, grass or roots, but in former times such things were not expected from a peach orchard after it began to produce full crops of fruit.

You have told us how to plow, manure, work and embellish our lands, to gather and secure our crops, with a long list of etceteras, but there is one matter that I think is overlooked, and requires more attention than appears at first view—and if not the base of Mr. Comstock's proposed system for his million of dollars, is and has been mine for years; and that is, how long a plant can be cultivated without injury to the growing crop, or at what stage of growth should we cease to work a plant to obtain its greatest yield.

I have heretofore given my views in regard to Indian corn, and I will now give some experiments made several years ago for my own satisfaction: but there has been no repetition of these experiments, as they fully corresponded with my views before making them. 1st. Two double rows, (25 yards in length,) of peas were planted, with an alley of three feet between the rows; they were all hoed when the pea vine was about 8 inches high, and at this time supports were placed to one of the rows. The other row was left without supports till the first blossoms made their appearance, when it was hoed again and then stuck. The pea vine in the first row, attained the height of about 3 feet 6 inches, and bore abundantly. The row hoed, when coming into bloom, attained the height of about 28 inches, and the crop was not equal to one-fourth of the first row. 2d. Two double rows of bush beans were selected and treated with the hoe in like manner, but here the result was somewhat different; the beans hoed, when coming into bloom were checked in growth; but in a few days new branches began to push forth, and upon these branches the beans were good, but on the first branches the pods were short and defective, and the crop not equal to the first row. The roots of some of these vines were carefully examined, but to speak of this part of the plant in this communication, would not only extend this article to a great length, but would be out of place, and I will conclude this exposition by saying that a similar effect was produced in the yield of the crop, upon two rows of potatoes treated in like manner.

Having laid by (to use a common phrase,) a young peach orchard of over 600 trees, I may in due course of time have to recur to this subject again. With much respect, your friend. LYTTLETON PHYSICK.

Ararat Farm, Md., June 28, 1843.

OATLAND VILLA, LONG ISLAND.

MESSRS. GAYLORD & TUCKER—I take the liberty of forwarding the following garden memoranda for insertion in the Cultivator. It may be interesting to a few, particularly to the lovers of horticulture, to hear how extensively gardening is carried on in the establishment of D. F. MANICE, Esq., Oatland, Long Island. It is not surprising that gardening should be a favorite pursuit in this country, when we consider the climate is so favorable to the growth and maturity of tropical plants and fruits. It not only absorbs the attention of the wealthy and great, but it is admired in all its stages by the man of good sense.

Oatland Villa, the country seat of the above named gentleman, is situate on Long Island, 16 miles southeast of New-York, and 4 miles east of Jamaica, the latter being the nearest railroad station. The structure of the dwelling is Gothic, a design taken from the French old style. West end of the latter, is a conservatory for the protection of plants requiring a moderate temperature, such as azaleas, camelias, pelargoniums, pemelias, and calceolaries, of which there are rare varieties, selected from the most extensive collections in this country. Adjoining is an exotic conservatory on an approved plan, for the culture of tropical plants, requiring a higher temperature. Of the latter, there is a superb collection, from the lofty palms to the prostrate mosses: many of them are curiosities, such as the orchidæ, air plants clinging themselves to the bark of trees, putting forth their numerous succulent roots into the humid atmosphere, from which they take sufficient support to produce flowers abundantly, not more curious than beautiful. At the west end of the exotic, is a flower garden, laid out in geometrical figures, edged with box. The figures are so arranged as to form corresponding angles. The beds or figures are planted with annuals, perennials and herbaceous plants of dwarf growth. The color of the flowers was an object of importance when planting, so as to have the more delicate ones relieved by those of deeper hues. The principal borders in the flower garden are well furnished with standard and dwarf roses, Chinas, Bourbons, Teas, Noisettes and Mosses; the latter not more attractive than four sided rose pillars, covered with the best sorts most suitable for them, on each side a different variety. The latter is something novel to see when in flower.

Adjoining the flower garden are the pleasure grounds, laid out in Gothic style, a design of which has been taken from his grace the Duke of Devonshire's gardens, Chatsworth, Derbyshire. From the latter, a serpentine walk leads to the grapery, fruit and vegetable departments. The former is a range of glass, two hundred and ten feet long by twelve in breadth, divided by glass partitions into four compartments, suitable for early and late forcing. It is well furnished with grape vines, and peach, nectarine, fig and apricot trees are all in the highest state of cultivation. At the east end of the grapery is a pear and apple orchard, which are worked on dwarf stocks, intended for pyramid training. The latter mode modifies the form of the tree, and also facilitates the produce of fruit. Adjoining the latter, is a mushroom house, melonry and framing ground for forcing culinary vegetables at seasons when they cannot be obtained in the markets.

For fear these notes will take up too much space in the columns of your valuable paper, I will omit the vineyard, peach, plum and other orchards. The horticulturist and amateur gardener will find a rich treat in viewing Mr. Manice's establishment. Gardening is to be seen here in all stages, as extensive as in any establishment in Europe, with very few exceptions.

A LOVER OF SCIENCE.

POUDRETTE FOR FALL OR WINTER CROPS.

THE following was received after the space allotted to communications was filled. We give it a place here, that those who choose to make a trial of poudrette may have the benefit of the writer's suggestions in season for application at the approaching seeding:

MESSRS. GAYLORD & TUCKER—The question has been often asked, is poudrette a good manure for *winter wheat and rye?* and you will oblige me by inserting the following extracts from letters and statements in relation to its use on winter wheat and grass.

Mr. Edward Condict of Morristown, New-Jersey, says, that "Early in October last, (1841,) on about one-fourth part of a field, after the wheat was sown, about twenty bushels of poudrette to the acre were sown broad cast; and the result is, that on harvesting, that part where the poudrette was put is much the heaviest grain, and but very little injured with rust or mildew, while the other part of the field is considerably injured."

Mr. W. W. Mills of Smithtown, L. I. says, that "Where poudrette was used, the wheat came in well, and the berry was fair; but where bone was used, about the same cost to the acre, in the same field, it was winter killed and very much shrunk, and the produce was only about one-half the number of bushels to the acre."

Mr. Samuel Fleet of Hastings, Westchester county, says that he "finds it efficient, if applied when seeding down. The seed *took* much better in the same field where poudrette was used at seeding, than where other manures were used—the whole being put down at the same time."

Mr. Lemuel Soper of Huntington, L. I., says:—"I used poudrette on wheat, at the rate of forty, 60 and seventy bushels to the acre; I got as good wheat from forty bushels of poudrette as from forty waggon loads of barnyard manure, and equally as good as where I used sixty or seventy bushels of poudrette to the acre"—thus showing conclusively that it is not profitable to use it in too large quantities.

Professor Johnston says, that *Hermbstadt* sowed equal quantities of the same wheat on equal plots of the same ground, and manured them with equal weights of different manures; and from one hundred parts of each sample of grain produced, he obtained the following results, viz:

With no manure, he got	3	times the seed, containing gluten,	9·02	--starch,	66·07
" cow dung,	" 7	" "	12·00	"	62·03
" pigeons'	" 9	" "	12·02	"	63·09
" Horse	" 10	" "	13·07	"	61·64
" Dried night soil,	14	" "	33·14	"	41·44
" Dried ox blood,	14	" "	34·24	'	41·03
" human urine,	12	" "	35·01	"	39·03

"The manures employed by Hermbstadt," says Johnston, "are *supposed*, during fermentation, to evolve more ammonia in the order in which they are placed, beginning at the top of the list; while the amount and kind of the produce obtained by the use of each, afford the chief evidence in favor of the opinion that this ammonia actually enters into and yields nitrogen to the plant."

By this statement, it will be perceived that in quantity and richness, the amount of gluten contained in the wheat, the produce of "*dried night soil,*" or poudrette, was very much greater than from any other kind used except *blood and urine;* and it should be borne in mind that the poudrette prepared by the "New-York Poudrette Company" *includes* the urine, and may be obtained for *this fall's use,* at lower rates than it has been before sold, viz: *seven* barrels for *ten* dollars, on application to D. K. MINOR, 23 Chambers-st.

New-York, July 20, 1843.

LARD OIL.— It appears from a notice in the *Prairie Farmer,* that there were five manufactories of lard oil in operation in Chicago during the last winter, in one of which about 2,000 gallons were made from 25,000 lbs. lard. But little of the stearine was made into candles, the proprietors preferring to keep it on hand a year before converting it into candles, as it improves by age.

SOUND ADVICE.—We extract the following from an excellent address, by Judge O'NEAL, to the S. Carolina State Ag. Society:—"There is one remedy, and only one, for the state of things resulting from the low price of cotton; it consists of economy at home and abroad. If we could bring ourselves down to the standard which the present price of cotton presents, all would soon be well. Buy neither pork, mules nor horses. Let these be the product of the farm, and one branch of our present difficulties will be cut off. Carry this spirit of retrenchment into the household, and let home furnish all the usual supplies of clothing for the laborers, and hard times will begin to be good times. Real independence, that which is above want, will occupy every farm."

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JUST PUBLISHED—PRICE 31¼ CENTS.

LECTURES on the Applications of Chemistry and Geology to Agriculture, by Jas. F. W. Johnston, M. A., F. R. S. &c. Part III. On Manures—their nature, composition, and mode of action, and their best application to improve the soil, For sale by D. K. MINOR, 23 Chambers st., corner Centre st., New-York, also at the office of "*The Cultivator,*" Albany, and by Booksellers and News Agents generally. Price 31¼ cents.

Parts I. and II., reprinted from the author's second edition, will be ready early in August. Part IV. will be published within one week after its receipt from London.

NOTICES OF THE WORK.

"The most complete account of Agricultural Chemistry we possess."—*Royal Ag. Journal.*

"Nothing hitherto published has at all equaled it, both as regards true science and sound common sense."—*Quarterly Journal of Agriculture.*

"By their easy style are likely to prove interesting to the least instructed.****When finished, this book will form the only complete treatise on the whole subject to be found in any language."—*Blackwood's Magazine.* *Aug.* 1.—3t.

POUDRETTE.

CHEAPER STILL—Seven barrels for $10, and eleven barrels for $15, for this fall's use on Wheat and Rye—in order to show its great value for those crops. Orders will be executed immediately on receipt of letter, or personal application with the money, to D. K. MINOR,

Aug. 1, 1843.—3t. 23 Chambers st., New-York.

VALUABLE FARM FOR SALE.

THE valuable and highly cultivated farm now occupied by Mr. Earl Stimson, in the town of Galway, Saratoga county, containing about 325 acres, will be sold at public auction, by virtue of a decree of the Court of Chancery, at the Court House in the village of Ballston Spa, on Saturday, the ninth day of September next, at twelve o'clock at noon. This farm is so well known to agriculturists, that it is unnecessary to describe it more particularly. The property is so situated that it will make three good farms, and will be sold together, or in parcels, to suit purchasers. The sale will be absolute to the highest bidder, on the ninth of September, and a large portion of the purchase money may remain on mortgage if desired. For further particulars apply to Samuel W. Jones, Esq. Schenectady, or to the subscriber, No. 75 Nassau street, New-York.

July 19, 1843.—2t. J. OAKLEY.

AGRICULTURAL AND SEED STORE.

WHOLESALE AND RETAIL.

GIBSON & RITCHIE, 311 Broad st., Newark, N. J., would call the attention of Seedsmen and Agriculturists to their extensive assortment of Garden, Field and Flower Seeds, which they can supply at the lowest price, and will warrant of the best quality.

They have also always on hand a stock of Agricultural Implements, as Fanning Mills, Corn Shellers, Straw Cutters, &c. of the newest and most approved constructions, and would direct the attention of manufacturers to their establishment, which is the only one of the kind in this state, and is most advantageously situated. Satisfactory references will be given, if required, to any one having any Agricultural Implements which they wish to place for sale on commission. Cast Iron Pumps of a superior construction. *Aug.* 1.

SHORT HORN DURHAMS.

THREE or four Durham Heifers, one and two years old, and three young Bulls, from 10 to 13 months old, are offered for sale by the subscriber. Some of these young animals are out of his imported Bull Duke of Wellington, bred by Thomas Bates, Esq., Kirkleavington, England. The stock of Wellington will carry its own recommendation. The two year old Heifers are, and will be in calf, by Wellington or his son Meteor, out of his imported Heifer Dutchess, which latter animal was also bred by Mr. Bates, and out of his Prize Bull Duke of Northumberland. Inquire of A Clockie, on the farm, or of the subscriber, at his residence in Troy. GEO. VAIL.

Troy, July 1, 1843—2t.

SALE OF DURHAM SHORT HORN CATTLE AND SOUTH DOWN SHEEP.

THE subscriber, desirous of reducing his stock, will offer for sale, at auction, on Wednesday, the 15th of September next, at 10 o'clock, A. M. at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers and calves, and between 70 and 80 head of South Down sheep, consisting of bucks, breeding ewes, yearlings and lambs, bred from the stock imported by Mr. Hawes in 1832, and from bucks imported since.

Messrs. Corning & Sotham, will also offer at the same time and place, some of their celebrated HEREFORD BULLS, of different ages. C. N. BEMENT.

Three Hills Farm, Albany, June 1, 1843. 4t.

TO FARMERS.

THE subscriber is prepared to supply Compound Guano, prepared from an analysis of that valuable manure. Also, dry Sulphate of Soda, Sulphate of Ammonia, &c. He has 5,000 to 10,000 bushels of Hard Wood Charcoal, which he will sell at 4 cents per bushel. Estimates will be given for any description of Chemical Manures that may be required. Engaged in chemical manufacturing for thirty years, he feels confident of giving satisfaction to those who may favor him with their orders. All letters asking information must be post paid.

JOHN BARLING, foot Jane-street, Greenwich.

New-York, April 28, 1843.—6t

TRIMBLE'S IMPROVED HORSE POWER AND THRESHING MACHINE.

THE subscriber offers for sale Trimble's Horse Power and Threshing Machines, which are equal to any in use. They can be used either with one or two horses, and can thresh 15 bushels of wheat per hour, with ease.

Price of Horse Power, $55
" Threshing Machine, 25

B. M FEEBORN,

July 1—2*t*. Agricultural Repository, 183 Front st., N. Y

WARREN'S NEWLY INVENTED HORSE POWER AND THRESHING MACHINE.

THE prices of these highly valuable machines, are as follows, viz:

For a Two Horse Power and Threshing Machine, together, $75
" One " " " " " 60
" Two Horse Power Machine, alone, 50
" One " " " " 40

Payment to be made in this city, on delivery of Machines. Bands not furnished except by particular order—price $4 each. Orders, post paid, executed promptly.

L. Bostwick, J. Plant, W. T. Cole. L. BOSTWICK & CO. 58 Water st.

New-York June 17, 1843—jytf.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

"THE CULTIVATOR ALMANAC."

The publisher of "The Cultivator" will issue, early in September, "*The Cultivator Almanac, or Rural Calendar for* 1844," which will embody, beside the usual astronomical calculations, a great variety of facts, hints, suggestions, &c., which it is believed will prove extensively useful to farmers and planters. In the arrangement of its pages, utility has been the object kept in view—the condensation of the greatest amount of valuable matter into the smallest space. It will be illustrated by numerous engravings, and printed in a neat and tasteful style, and afforded at the low price of $20 per 1,000—$2.50 per 100, or 37½ cents per dozen. Editions will be published with astronomical calculations for the several sections of the United States, and orders for it are solicited from our friends in all parts of the country. Address Luther Tucker, publisher of the Cultivator, Albany, N. Y.

MONTHLY NOTICES.

Communications have come to hand, since our last, from Richmond, (2,) J. L. Mott, A. J. Downing, Franklin County, G. Butler, Henry Colman, North East, J. W. Smith, A. P. Peck, Wm. Weaver, L. Durand, N. B. Cloud, J. J. T., J. E. Ferre, A Saratoga Co. Farmer, R. A. Avery, Sanford Howard, H. T. C., L. Bostwick,*†, N., Richmond, C. N. Bement, A Subscriber, M. W. Phillips, Thomas Thompson, H. A. Garrett, N. N. D., J. R. Speed, Lansingville, J. M. Harlan, A. E. Cowles.

N. N. D.'s favor came too late for this paper. We shall therefore forward it to the chairman of the Com. on Plows, that the committee may have the benefit of his experience and suggestions.

A. B. N. and *A Subscriber*, with answers to their inquiries, in our next.

J. R. S. and *H. A. G.*—The *Western Shepherd*, by Geo. Flower, was printed at New Harmony, Indiana, and has never to our knowledge been on sale in this part of the country. We believe Mr. Flower resides at Albion, Edwards co., Illinois. It may probably be obtained by addressing him at that place.

W. D. M., Tuscaloosa.—Smith's subsoil plow is not manufactured in this country. The Worcester subsoil plow, described at p. 49 of our current vol., is for sale in this city—price $15.

C. J. R., Long-Island.—Please send us the "Calendar," in as concise a form as may be.

☞ We will endeavor to comply with the request of *A Subscriber*, Marietta, by giving the ground plans, expense, &c. of Cottage Row.

T. M., jr., Erie, Pa.—Collect the bill in the funds mentioned.

Acknowledgments.—We are very greatly indebted to Mr. Colman, W. W. Wadsworth of Geneseo, (now traveling in Europe,) P. L. Simmonds, Foreign Newspaper Agent, London, and to the Editors of the *New Farmer's Journal* and the *Mark Lane Express*, for papers containing copious accounts of the great Cattle Show of the Royal Ag. Society at Derby. The *Pictorial Times*, received from Mr. Simmonds, furnishes us with pictorial representations of the Council Dinner, the Mayor's Dinner, and the grand Agricultural Dinner, at which 2,000 gentlemen, and 500 ladies, (in a gallery fitted up for their use,) were present—three different views of the Cattle Yard, and views of the Grand Pavilion and of the Trial of Implements. We are also indebted to Mr. Colman for the notes of his speech at the Council Dinner, which will be found in another part of this paper, and to Mr. Simmonds, for Denton's Treatise on "Model Mapping, as suggestive of a general and economical system of Drainage and Irrigation"—Baldwin's Treatise on the "Cultivation and Uses of the Swedish Turnep," and for several pamphlets, showbills, advertisements, &c.

To the Author, for "The Every Day Book," by Joel Munsell.

To the Rev. E. G. Smith, the translator, for "The Economy of Farming."

To D. Appleton & Co. and Wiley & Putnam, for their editions of "Productive Farming," and to the latter firm for Prof. Johnston's Lectures, Parts I, II, III, and the Appendix.

To H. T. Chapman, Esq., New-York, for a cock and pair of pullets of the Dorking breed. They are fine birds, and were raised from a lot imported by Mr. C. two years since. Gentlemen wishing to procure this excellent breed of fowls, can obtain them by addressing Mr. C. No. 77 Fulton st. New-York—price $4,00 per pair.

To Thomas Allen, Esq., formerly editor of the Madisonian, for the Prize List of the St. Louis Co. (Mo.) Ag. Society.

To L. Durand, for the New-Haven Palladium, containing a communication of Erastus Dudley of North Guilford, (Ct.) on the subject of *Bommer's Manure*. Mr. D. says:—"Having made use of Mr. George Bommer's method of making manure by fermentation, for more than one year, and having tested its results in various respects, I am now fully prepared to give my unequivocal testimony in its favor."

To Sanford Howard, Zanesville, (O.) for specimens of silk from Mr. Gill's manufactory, a notice of which will be found in this paper. The specimens are very superior; among them, is a piece of the crimson silk from which the flag for the China mission was made.

To J. R. Speed, Esq., for the Prize List of the Tompkins Ag. Society.

Sale of Improved Stock.—It will be seen by a notice in this paper, that Mr. Bement, of the Three Hills Farm, near this city, proposes to sell at public sale a portion of his improved stock, consisting of bulls, (old and young,) cows, heifers, calves, South Down sheep, &c. The sale will be held on Wednesday, the 13th of this month, and will afford a good opportunity to those who wish to improve their stock to procure such animals as they may want.

☞ A most gratuitous, and, were it not for the malicious spirit indicated, amusing attempt is made in a late number of one of our recently established agricultural papers, to pervert and misrepresent an article on breeding, which appeared in our paper for July. To show its true nature, it is only necessary to say that the effort is made to show that the Cultivator has "grossly calumniated" the Short Horn Durhams; and the writer says, "If the Short Horn breeders will put up with such gross calumnies on their stock, why then we are greatly mistaken in their spirit, and the sooner their herds are driven back to the place from which they came, the better." It was news to us to hear that we, who have ever been the strenuous advocates of the Durhams, had calumniated them; and so, we doubt not, it will be to such breeders as Messrs. Prentice, Rotch, Bement, Vail, Sherwood, Randall, Hillhouse and others in this State, and to the Messrs. Lathrop of Mass.; Messrs. Collins, Townsend and Whitney of Conn.; Dr. Poole of New-Jersey; Messrs. Gowen, Cope and Morris of Pa., and a host of other Short Horn breeders, who have been the constant readers of the Cultivator. They will wonder as much as we did where these gross calumnies are to be found in our pages. For the thirteen years we have had charge of an agricultural paper, we have been in the habit of expressing our views freely on all matters of interest to the farmer. In so doing, it is not strange that at times we have crossed the course of those whose selfish purposes and the interest of the great body of the farming community do not coincide, and who, for that reason, are disposed to assail us. When our opinions have been criticised, we have ever been ready to concede to an opponent whatever we were convinced was right, our only object being the attainment of correct principles. But when our opinions have been called in question in a captious or faultfinding spirit, with attempts to misrepresent and pervert our views, as in this case, it has been our practice to allow such attacks to pass without notice; and we should not have deviated from our usual course in the present instance, had not our attention been specially invited to the article by the journal itself. The temper and tone of the paper in question are such as to preclude all hope of an amicable discussion; we cannot enter into a controversy with a writer who knowingly and willfully misrepresents us; and having obtained the notice sought for, we hope the editor in question will be satisfied. We certainly wish him no harm, and to be obliged to retract the many kind things we have said of him would pain us; but we must confess that since his trip to England, whither he was sent, we believe, as an agent to purchase pigs, he has afforded the most striking illustration of the "important man," so humorously described by Washington Irving, who had smelt salt water and written a book, that has ever fallen under our notice. Although he has never to our knowledge bred any farm stock but pigs, immediately on his return, (without having seen but a moiety of the fine Short Horns of England, and probably not a single extensive herd of Ayrshires,) he pronounced, with oracular gravity, that "there was but one man's herd in England that would improve our own," and that there was no necessity for importing Ayrshires, inasmuch as we "could make them by the thousands here." His assertions that we have calumniated the Short Horns, will receive about the same degree of credence that the above assertions of his did here and in England. That his efforts to distort and fix a meaning on our language never intended by us, will have more weight with the public than did his European discoveries, we do not believe; in any event, he is welcome to all the credit or profit he can derive from them. We take leave of this part of our monthly notices with the remark, that there is not a well informed Short Horn breeder in the country that will claim more for them than we have cheerfully allowed in the article in the Cultivator; and that there is not a man in the United States, claiming the character of a gentleman, who would not be ashamed of the language and manners of the paper we have here noticed.

Prize Essay.—We commence in this paper, the publication of the Essay on Manures, which received the Prize offered by the N. Y. S. Ag. Society, at its annual meeting last winter. It has received the highest commendation from the agricultural press, and is, we think we may say, though from the pen of our associate, one of the ablest essays which has yet appeared on the subject. On copying it into his paper, the editor of the American Farmer remarks:—"We should do injustice to the ability with which Mr. Gaylord has treated every head of the various subjects he discusses, were we to refrain from the expression of our admiration of the profound research, astute judgment, critical acumen, scientific attainment, and practical knowledge he has displayed. The essay was most truly worthy of the *prize* it won for its erudite author."

Measuring Cross.—The description of this instrument, p. 82, seems perfectly plain to us; and we think our correspondent, "*North East*," if he will read it carefully with the instrument in his hand, and place the point *d.* on such part of his face as will bring g. and *a.* on a right line, g. *a. f.* with the eye, and then go such distance from the object as is necessary to bring *i. c.* also on a right line with the eye, we think he will get it in a right position. Its correctness, and whether the unevenness of the ground will make any difference, may easily be tested by trying it on a tree, and then felling and measuring its trunk. We will, however, endeavor to give North East's Measuring Cross hereafter. His inquiry is answered in another part of this paper.

The Herd Book.—The long expected vol. (the 4th,) of this work, was issued in England on the 1st of August.

Butter and Eggs.—Our domestic animals are not in the habit of striking for higher wages, but we should scarcely wonder if our cows and hens should propose conventions for deciding on ulterior movements. Only think of new sweet butter made from clover pastures, hawked about the streets, and finally exchanged perhaps for groceries at six cents per lb. And eggs gathered daily from their cosy nests in the clean straw, and deemed a drug at six cents a dozen. Yet this has been the state of things in most of our country villages, and hundreds if not thousands of tons of butter and myriads of eggs have been disposed of at these prices. If our animals will continue to produce at such prices, they must be very good natured, to say the least of them.

The Mississippi Farmer, a monthly octavo of 16 pages at $1.00 a year, has just been commenced at St. Louis, by J. Libby.

Foreign Intelligence.

MEETING OF THE ROYAL AGRICULTURAL SOCIETY AT DERBY.

By the kindness of our London friends, we were put in early possession of various London and other English papers, containing very full accounts of the proceedings of the meeting, and several of them filled with pictorial illustrations of the cattle yards, trial of implements, dinners, &c. &c. It must have been a proud day for the English agriculturist, and a scene which no friend of farming could look upon without feeling his blood coursing more warmly through his veins. The United States were ably represented at the meeting by Mr. Everett, minister to Great Britain, and by Mr. Colman, who, our readers are aware, is now on an agricultural tour through that country. Both gentlemen were called out, Mr. Colman at the Council dinner on Wednesday, and Mr. Everett at the great Pavilion dinner on Thursday, and their speeches were very effective, and received great applause. Of Mr. Colman's, our readers will judge for themselves, as we give it below, and our limits alone exclude Mr. Everett's, as it was decidedly one of his happiest efforts. Better, far better, for two such great nations to meet each other at the table to celebrate the triumphs of agriculture, than to mingle in the deadly strife of the field, to offer bleeding sacrifices to the grim demon of war. Premiums were awarded to the Short Horns, Herefords, Devons, as distinct breeds, and premiums were also given for the animals that had no claim to descent from any of these. The large engravings of the Times give a lively representation of the arrangements, buildings, &c. for the Fair, and of the multitudes by which it was attended. We may here add that the reception which has been given to Mr. Colman has been of the most hearty and gratifying kind, and that he will accumulate materials for a most valuable publication, no one can doubt.

MR. COLMAN'S SPEECH.

At the Council dinner of the Royal Agricultural Society at Derby, Professor Owen gave as a toast, "Success to Agriculture over the whole world."

The President, Lord Hardwicke, called upon Mr. Colman from America, to reply.

Mr. Colman began by observing that he never rose with more diffidence than upon this occasion. He felt oppressed by the conviction of his inability to say what would be worthy of the attention of this distinguished assembly; and by his grateful sense of the treatment which he had received, which had been nothing but a succession of acts of kindness and hospitality since his arrival in the country. He agreed with the noble President in his admiration of the implements and machines exhibited in the Show yard; but he left the yard with great regret, that among all the various and ingenious productions, there was not to be found a machine for making a dinner speech. He hoped that some one of the ingenious gentlemen at the other end of the Hall, might presently supply the deficiency. It might not be necessary for the members of the Royal Ag. Society, whose speeches he desired, in the language of the committee, "to commend generally;" nor to the Minister Plenipotentiary from the United States, who has an admirable machine of his own, which always turns out the best work; but for such a poor wight as himself, from the Yankee land, it might be extremely convenient.

Agriculture was the great subject of that occasion; and he meant no invidious reflections, when he pronounced it the art of all arts, the foundation of true wealth, a source of rational pleasure and useful occupation, and the great conservator of morals. Its indispensableness must be universally acknowledged. They might do without physicians, if they would observe strictly the laws of health; and without lawyers, if they would keep their tempers; and possibly without preaching, if every man would take care of his own conscience; and without soldiers, if men would observe the great law of christian equity, and "do to others as they would that others should do to them;" but how they were to do without the farmers he did not well see.

Agriculture, he had said, is the foundation of true weath. It is indispensable to human subsistence. Gold and silver are the mere exponents of wealth; and a man might command the mines of Golconda, and heap up his accumulations of money as high as the Andes, and yet starve in the midst of them. Agriculture is the source of many of the luxuries of life. Agriculture is favorable to morals. He would not assume for the farmers more virtue than prevailed in other classes; but he would say of the agricultural profession, that there is nothing in its pursuit prejudicial to good morals. Agriculture is a source of innocent and rational pleasure. Many of the brightest and best minds which ever adorned human nature, have so found it. He believed his excellent friend, (the Duke of Richmond,) for so his kindness permitted him to call him, highly and justly as he prized the duty of defending his country's honor on the field of battle, would yet acknowledge that he has found some of his sweetest pleasures in the pursuits of agriculture; in the improvement of this art, and in rendering the earth productive for the sustenance and comfort of both man and beast. There was another great mind, to their interest in whose reputation he was surprised to find the English were not more sensible; he meant Washington: for Washington was born an Englishman, a British subject, and defended the honor of the British flag, and though afterwards he became an undutiful son, yet every fair mind would do justice to his convictions of duty. Washington found in agriculture the highest and purest gratification; and his agricultural journals, as they exhibit the most minute and exact attention to the management of his farm, even amidst the burdensome and anxious duties of public life, are among the most instructive documents ever given to the world.

England takes the lead of the world in its improved agriculture. It has long been distinguished for its enlightened improvements. The names of Tull, Young, and Sinclair, form a bright constellation. There are other names to be added to them, of whom he would say in the words of the Roman poet, "may it be late before they return to the stars" who are destined to share even a more brilliant immortality. He could not speak from personal observation, but from information; and it is said that of all nations, Belgium has most fully tested the productive capacities of a single acre. The agriculture of Germany must be highly improved, as he had the most authentic assurance from a German friend, that he had himself assisted in gathering 4000 bushels of potatoes from five acres of land, a crop which he believed had in no country been surpassed. The agriculture of China is reported to be carried to a high degree of perfection. It is stated that the Chinese literature has 27,000 treatises upon agricultural subjects. This may be Chinese exaggeration; but one or two of their treatises, which had been translated, he had read, and he could say they showed intelligence and exactness of observation. Indeed it would hardly be well to treat with disdain the agriculture of even a barbarous nation, who by their agriculture had subsisted such an immense population and accumulated such vast amounts of wealth and laid so large a portion of the world under tribute. America is urging on her agricultural improvements, and like young Iulus, is following in the path of her ancestor, "with unequal steps."

The advancement of agriculture, he deemed among the higher pursuits of philanthropy. Its moral and religious tendencies deserved consideration. There is every thing in the cultivation of the earth to invite the mind to the contemplation of that invisible and beneficent agency, which from the wide-spread table of its bounty, supplies the wants of all living things.

He would call the attention of that assembly to one other subject, and that was the improvement of the condition of the laborer. A high authority commanded us "not to muzzle the ox which treadeth out the corn." Every effort should be made for the education and elevation of the laboring classes. It was too late in the day to decry the value or disparage the influence of education, as though it would injure the laborer. He would ask if it injured those classes in society who are already blessed with it? It should be given to the laboring classes likewise, as a consolation under their severe toil, and as a means of wholesome recreation, and of withdrawing them from the beer house and other places of corruption, and of making their homes more happy.

Mr. Colman asked leave, in conclusion, to offer the following sentiment: England—the sun in the political sphere; like her own Eddystone, a blaze of light in the midst of the ocean. May she send forth her radiance, not to wither but to cherish; not to make desolate, but to quicken and make alive. May her intellectual and moral energies be concentrated upon the highest objects of philanthropy, the spread of knowledge, the advancement and diffusion of the useful arts, and the universal extension of civilization, liberty and peace.

Wheat in France.—We find in the *Revue des Economistes* of Paris, some interesting statements respecting the wheat crop of that country, which exhibits the resources and the fertility of France in a striking light. It appears that a surface of two thousand eight hundred square leagues is appropriated to the culture of wheat. This is more than two-fifths of the tillable land of the kingdom, and about one-tenth of the whole superfices of France. The Revue states that the quantity of wheat raised in France is seventy millions of *hectolitres*, (each hectolitre is 2-837, or nearly 3 bushels,) and is valued at $262,000,000. This is said to be a greater quantity of wheat than is raised in Britain, Poland, Prussia, Sweden, Holland, Belgium and Spain; but unless the quantity of wheat raised in Britain has been greatly overrated, this statement of the Revue cannot be correct. Between eleven and twelve millions of hectolitres are used for seed, and about 60 millions are consumed in the country, very little being exported. The Revue estimates the consumption of wheat by the inhabitants of the several countries named to be as follows. (The titre is half a litre, or rather more than a pint.)

France,	to each	individual,....	210	titres,
Great Britain,	"	"	163	"
Spain,	"	"	127	"
Holland,	"	"	57	"
Prussia,	"	"	36	"
Poland,	"	"	25	"
Sweden,	"	"	8	"

Estimating the quantity required by each person at 3 hectolitres, or 5½ bushels, there is in France a deficiency of 1¼ hectolitres to each person, in the aggregate, which is supplied by rye, corn, buckwheat, chestnuts, &c. Potatoes are not extensively used in France, though they are beginning to be looked upon with more favor. Of every hundred acres of land cultivated in France, about forty acres are in wheat; but as about one-third of the whole quantity is raised in some ten or fifteen of the departments of the north, it is clear that a much larger portion of the cultivated land in these districts, must be in wheat, than in the others. Taking the whole cultivated, the average product is to the seed sown, as six and a quarter to one. The best wheat districts produce more than this, but the average of many of the departments is below this estimate. These estimates, founded on the returns furnished by the Bureau of Agriculture in France, furnish some valuable points of comparison with the wheat crop of this country, imperfect as the last census was in its details. Here we raise about 100 millions of bushels, with not one half the population. We consume also about the same quantity as in France, and we hope hereafter to be able to state the average quantity returned for the seed sown.

Review of the British Corn Market for June.—This part of the London Farm. Magazine for July is unusually full, and the effects of the introduction of American corn, (or wheat,) through the Canadas into England, discussed with great force and bitterness. Until quite lately, it has been the fashion there to decry all articles of American produce, but now when specimens have been introduced and sold all over the kingdom, they are compelled, reluctantly it may be, to admit their excellence. The Review says,—"The means for increased production are boundless, and the quality of the wheat in particular, is very fine, being fully equal to the best grown in Essex itself. American pork too, is likewise superior to any which even Wiltshire can produce, for it is fed on Indian corn, wild nuts, &c. and consequently cures better than any grown either in Ireland or Great Britain." If these are facts, and we do not doubt them, why not let the starving millions of England eat our surplus wheat and pork, and in return take those things which we do not or cannot manufacture for ourselves? The same article, in the part relating to the barley crop, says:—"At least one-third part of the beer now consumed, is manufactured from coarse sugar, salt, and many deleterious articles; for two barrels from the licensed brewer, are now regularly converted into three by a mixture of ingredients of the above description." Poor encouragement this for English beer guzzlers, and if they could understand the whole mystery of beer making, they would deem the encouragement poorer still. Barley can be raised, and profitably raised too, without converting it into beer; this is getting to be well understood in some of our best barley producing counties, and will doubtless be found to be true every where.

AGRICULTURAL INSTITUTE, BRIDGEPORT, CT.

The location of the Institute, (the intention to establish which, was announced in the Cultivator for July,) is on the east bank of the harbor, within a few minutes walk of the churches, in the midst of agreeable rural scenery. The object of the Institute is to furnish a system of education adapted to the wants of those youth who may be designed for the pursuits of agriculture. It is remarkable that agriculture, on which mankind are dependent for their very sustenance, which employs daily "not less than two hundred millions of men and nine-tenths of the fixed capital of civilized nations," should have received so little aid from legislation, and comparatively so little and so late attention from the learned and powerful; and that it has yet no schools or colleges to investigate and illustrate its principles, to advance its interests, to elevate its character, and to give it both as an art and a science, its just place among the several departments of human learning. It is intended that this Institute shall provide the means of a complete agricultural education. Those only will be received into the Institute, who have made considerable advancement in the ordinary branches of an English education. The full course contemplated will require from three to four years, and will embrace all the natural sciences, with their application to agriculture, particularly Chemistry, Geology and Botany; the evidences and general principles of natural and revealed Theology, Mathematics, Moral Philosophy, Political Economy, Rhetoric, History, Original Composition, Extemporaneous Speaking; the drawing of the various business papers, and the principles of civil, constitutional and national Law.

It is designed that courses of lectures shall be delivered by distinguished Professors, on the different branches of natural science, and particularly upon chemistry in its application to agriculture.

The ancient and modern languages will be taught if desired, and the pupil prepared for entering college. Lessons in music, penmanship and drawing, may be obtained at moderate charges.

There will be a systematic course of agricultural experiments to test the value of different modes of culture, of the several kinds of manure, and of all such products of the farm as may be suited to the climate. The pupil will have an opportunity of witnessing the various operations of farming, horticulture, and the planting and growing of fruit and ornamental trees, with the formation and use of the several kinds of manures. He will not be required to engage in field lobor, except perhaps to learn the use of agricultural implements; but when desired for the purposes of health or economy, he may be employed on the farm, in the garden or nursery, a given number of hours daily, for which a just allowance will be made on the term bills. A skillful farmer, gardener, and nurseryman will be employed, and the department of each will be conducted with a studious regard both to economy and scientific principles.

It is impossible, I fear, without trespassing too much upon your columns, to enter into a more minute detail of the plan contemplated for an Institute, the object of which is to promote the great interests of agriculture. Should the Institute be sustained, it will, in some humble degree, supply that system of education which has been so much desired; it will add something to the advancement and influence of agriculture, and tend in no slight degree to that concentration of power and interest from which agriculturists have hitherto experienced so little benefit. N.

CULTURE OF COTTON AND CORN.

We give the following from a private letter of Dr. Cloud, who promises us an article soon on the importance of devoting "more care and attention to the selection of Cotton seed." Under date of July 15, he says:—

"I have been induced to dispose of my place at Planter's Retreat, and settle in Macon co. This exchange, though greatly to my interest, I made most reluctantly, on account of the loss of my manures and other preparations for a *fair trial* and a *great* triumph in the improved culture of Cotton. I determined, however, to brave every difficulty, and I had collected at that late period a sufficiency of rather an inferior article of manure, that I found scattered about the place, to enable me to carry forward the experiment, though on a small scale, yet quite sufficient to test the system. Notwithstanding the most unfavorable circumstances, and a late start, together with the most extraordinary season I have ever seen, yet I have a beautiful experiment, both of *Cotton and Corn*, in every way equalling my last. My cotton now stands from 5 to 6 feet high, and topped on the 10th, on which day I counted on one stalk, and it not better than some others, upwards of 300 balls, blooms and squares. Treatment just as described in the Feb. no. of Cultivator. The land rather better in its natural state than my land at Planter's Retreat. I have no doubt but my success with corn under this system, will astonish planters as greatly as did that of my cotton."

ACCLIMATING CATTLE IN MISSISSIPPI.

We are greatly obliged to our friend M. W. Philips, Esq. of Log Hall, Hinds co., Miss., for his letter of July 23, from which we give the following extract:—"In the July number of your present vol., page 117, you seem to think there is no great difficulty in rearing the Durhams here. Having had some experience in this matter, as much and probably more than any one else, I beg to correct you, lest my friends may be led to go into the purchase, without knowing the whole ground. I will not for a moment contradict any one who would say improved cattle would succeed as well here as elsewhere, if we would provide ample stores of feed and pasturage. That is not the difficulty: it is the keeping alive the first summer; for almost nine-tenths of them die of disease, not want of food. They must undergo acclimation; there is no doubt of this fact; I have it from gentlemen of high standing, of many different plans being pursued, some stabling, some on fine pastures, some housing at night, &c., but in too many instances I might say all have died. We might prepare all sorts of roots and all sorts of clover, but as good as these are, in all probability August will find many of them 'numbered with the dead.' I have been the means of introducing more horned stock in this region at least of Mississippi, than any one else; have lost about one-half, and for days together, in 1840, had to haul out a cow or a heifer.

"The greater part of the stock brought here, came very poor; did not improve at all until about 1st of June; then grazing on a good pasture, with an abundance of water within a few hundred yards of where they were at any moment. I had fancied to myself they were safe, as they had begun to play and visibly to improve, when a fine young bull died, without any one noticing he was diseased. Immediately I brought up the stock into a lot, where the pasture was very trifling, commenced salting freely, with ashes, lime, tar and salts, but too late. All that were affected, except *one*, died, and some twelve head cast their calves. I tried bleeding, salts, blister on the spine, clysters, &c. &c., but of no avail. I immediately changed their diet, and kept them the balance of the year on principally dry food, since which I have lost only two from disease, one of them native bred.

"The experience of my friends corresponds precisely with my own. I will now give what I deem the best plan, and what I pursued with some others since received, and which plan was successful, had I not stopped too soon; but the cattle having lived till in September, I thought them safe, turned them into the pea field, and so soon as they began to improve, (in some 15 days,) one cast her calf, and with all the attention of housing, physic, (calomel,) &c., she died.

"I would advise cattle be brought here from the east, because I have had four sent here from Philadelphia and Baltimore; one of the first died, by the brutal treatment of a negro—the other as I state above. I would also advise calves be brought under twelve months, young of any kind becoming acclimated soonest.

"The cattle may be well kept until April or May; they should not be suffered to improve after that time, their principal food dry provender, with an occasional grazing, say from 8 to 9 A. M. and 5 to 6 P. M. Let them run in a well shaded lot with free access to abundance of water to drink or stand in; to salt, mixed with ashes or a little lime, and a shed under which they can lie in mid day and at night. This plan I pursued, and so far I have saved more, considering the number I brought out, than is by any means usual. Understand me, give them water, salt and ashes without stint; drive them to it, if they will not go, for frequently they will drink very much when they will not walk one hundred yards to it. Give them a well shaded lot; protect them from hot sun and the dew; feed on dry food, without permitting any increase of flesh, with enough grass to prevent fever or constipation of bowels, and no more.

"Rely on it, it is not leeches that always cause murrain: I lost one that had access only to spring water, that we all drank daily of. It proceeds often here from the grass being forced into an undue succulence by seasons and our warm sun. Instances are known here where almost a whole herd of a hundred or more natives have died of it, from the fresh, succulent grass putting up in August or about, after the woods were burnt in midsummer. A friend lost several, after a fine rainy spell of weather. I have given my plan to several this season, and so far have not heard of any losses, and certainly we have had just the season for murrain."

THE BREEDERS' CONVENTION.

The following came too late for a place in the department devoted to correspondents; we therefore give it a place here, and would renew the notice that the proposed convention is to be held at the Library of the American Institute, New-York, on the evening of the 17th October:

Messrs. Gaylord & Tucker—I am glad to see by the June no. of your most excellent and valuable paper, that a convention of breeders is to be held in New-York on the 17th of October; and I doubt not it will be fully attended from our own and from other states, as affording the very best opportunity of gaining information which is much wanted, not only by our young breeders, but by the agricultural community at large; I however wish the circular of the committee could have been more explicit as to the proposed mode of proceeding, and as to the farm stock to be examined, whether the whole or a part, and what part.

A frequent inquiry has been made within my hearing, as to the necessity of the convention doing more than to decide on what *are* the constituents of excellence *generally*, without descending into the particulars of *breeds*. It is claimed that what is profitable and best—what constitutes intrinsic value in *any* description of stock, is not changed by *breed*—it is still in the abstract the same thing; if a wide, full loin is necessary to excellence, is it not equally so in the Devon as in the Durham, and in all other breeds?

Now I take it this is the very view of the subject which a further acquaintance with the science will correct, and which the resolutions of the convention will tend to put in its proper light. If I understand the object of the meeting, it is to decide what of general excellence is compatible with the peculiar and characteristic excellence of the respective breeds—what can be exacted of them without a deterioration of those features which form their distinctive character and usefulness: for instance, great weight in the fore quarters, though very desirable and a decided excellence in the one breed, would injure the activity and utility of another; neither would the same size be necessary to the excellence of one variety, that would be required in another. Therefore, if purity of blood be desirable, its features must be retained, which could not be the case were the same points insisted upon as constituents of excellence, without regard to breed. The committee has shown its good sense and judgment in barring all comparison of breeds, and the convention will be more likely to agree as to what they *should be*, than as to what *they are*. Much, however, of the usefulness and harmony of the convention will depend on the chairman, and his personal acquaintance with the subjects under consideration; for a watchful attention to, and a quick perception of the turn the debate may take, will be necessary to guard against the vexed question of comparative excellence.

Should these first meetings of the convention be productive of the advantage that is anticipated, will they not be so continued as to embrace all descriptions of stock, either now or at some future time, and perhaps discuss other unsettled questions of deep interest to the breeder?

I believe great advantages must grow out of any arrangements that would more frequently bring together the breeders of stock, for the purpose of discussing matters connected with their common interest. Yours, &c.

Thomas Thompson.

Mountain Farm, August 11, 1843.

WOOL GROWING.

In Mississippi.—Extract of a letter to the editors of the Cultivator, from H. A. Garrett, Esq. Adams co., Miss.:—"I have much confidence in our being able to raise the best and finest wool in this country. Our sheep here, in small flocks, live the whole year round in fine order, without any other feed than what they get from the pasture; we never hear of any disease or complaint with them; salt, and protection from the dogs, is all the attention they require. I do not know of any very large flocks in this country, and cannot say how they would get on. I presume, however, it would require much more pasture than we now have."

On the Prairies.—Our friend J. R. S., asks the following question:—"Why is not the vast extent of prairie in Wiskonsan and Iowa, well adapted to the growing of fine wool?" On this subject, we give in this paper, the opinions of an eastern wool grower, and we shall be glad to hear some of our western friends who have had experience in the business, on this question.

FARMERS' CLUBS.

Of the various methods that have been adopted to awaken inquiry among farmers, promote investigation, furnish the means of interchange of thought, and create social harmony and good feeling, few have been more successful than the associations known by the name of farmers' clubs. What the agricultural society is to the county, these are in many respects to the neighborhood; and the good results, wherever they have been instituted and sustained, are not less apparent. The effect of such associations does not so much depend on the numbers, as on the spirit, zeal and intelligence of the members, although where the right feeling prevails, the more that combine the better. There are few agricultural neighborhoods where a dozen men cannot be found willing to meet once a month to compare opinions, and communicate the results of their experience and observations. Even half a dozen, if they are men of the right stamp, will make the meetings of such a club most interesting and instructive. Such meetings are the places to discuss and settle all points of a practical character in agriculture; soils, their qualities, and the crops best adapted to each kind; agricultural implements and their improvement; new theories, and their rationality or practical bearing; questions connected with agricultural reading or education; in short, every thing belonging to the farm, the orchard or the garden, will be found a suitable and fruitful topic of remark. Such a club should possess an agricultural library, supported by the contributions of each associate, and open to every member; the books and periodicals to be subject to such regulations as to afford security against loss. The best foreign as well as domestic works on agriculture and its kindred sciences might always be found, and all the most valuable of our periodicals useful to the farmer placed on file for reading or for reference. To each individual the expense would be far less than if his labors for information were alone and unaided, and the mutual advantages decidedly greater.

Another of the benefits resulting from such an association would, or might be, the formation of an agricultural museum, embracing specimens of the various soils cultivated by the members, or any of those remarkable for their fertility or otherwise; specimens to illustrate the geological character of the district, and show the bearing this science has on agriculture; specimens of the various kinds of grain and cultivated plants, whether remarkable for size, novelty, or their valuable qualities; fruits, roots, &c. according to the season; together with all such matters as are calculated to interest and instruct such a body of men; the whole, as far as possible, to be preserved for the benefit of all. We have merely thrown out these few hints, in the hope that some of our spirited farming neighborhoods may be induced to further develop them and reduce them to practice. Wherever, in Europe or in this country, this or kindred plans have been adopted, the results have been most happy, and the cause of agriculture has received a decided impulse.

SUCCESSIVE CROPS OF WHEAT.

We find in the American Farmer a letter from A. Whann, Esq. of Elkton, Md., detailing his account of growing several successive crops of wheat from the same land. We give it as a proof of the capabilities of a good soil, not because we would recommend such a system of exhausting culture. The ground had been cleared for a long time, and for many years had been in timothy and clover. The first year it was manured on the clover lay, plowed and harrowed, and planted with corn—product, 850 bushels. We throw the 7 years into a tabular form:

1st year,	manured, plowed and harrowed; corn,	850
2d "	plowed and harrowed; barley,	350
3d "	manured, plowed once, and harrowed twice; wheat,	422
4th "	manured, plowed once, harrowed twice; wheat,	400
5th "	manured, burned stubble, plowed as before; wheat,	350
6th "	manured, plowed once, harrowed twice; wheat,	400
7th "	manured, plowed once, harrowed twice; wheat,	300

Mr. Whann used the red wheat for seed, changing it every year until the last, when he sowed one-half with a white wheat which gave only 100 bushels, causing a loss of a quarter of his crop. His manure was stable manure, and not applied heavily. He sowed 2 bushels to the acre, and on the 15th of September in each year. Neither the fly or the rust troubled his wheat, though prevalent in the vicinity.

Clover and Texas Grass in Mississippi.—Our friend Philips, of the *Southwestern Farmer*, urges upon the Mississippians the necessity of a more general introduction of clover, and cites several cases where it had succeeded perfectly. Speaking of the grasses, he says:—"Our opinion at present, is that Texas grass will suit us better than any other—it is green all winter, spreads on the ground, has strong fibrous roots—on good land will grow high enough to mow, will bear the hoof and bite, and can be cut more than once."

Answers to Inquiries, &c.

USE OF SALT.

Messrs. Editors—I see it stated that common salt, (muriate of soda,) is coming into use largely in England, as a manure. We have around a salt manufactory at this place, a large quantity of refuse salt, with which we could very easily test its virtues. I am, however, ignorant of the quantity per acre used on land, and of the mode of using it; also on what soils, and on what crops it is found to be the most beneficial. Any information on this subject will be gratefully received.

Athens co., Ohio, 1843. S. F. Vinton.

In England, salt is generally applied to the wheat crop, and is spread on the fallow "some time before sowing in quantities of not less that ten, or more than twenty bushels per acre." The use of salt does not appear to increase the bulk of straw, but the ear is better filled, and the grain plumper and heavier. Another mode of applying salt, is to take quick lime and slake it with strong brine. This should be done a month or two before it is required for use, and then mixed with swamp muck, or earth, before spreading on the soil. Lime so prepared, is said to produce a capital effect. From the experiments made, it appears that light or gravelly soils, are those most benefitted by the use of salt.

THE WILD CHERRY.

Messrs. Editors—It is known that the leaves of the wild cherry, if eaten by cattle, when they are just wilted by the sun, will kill them; whereas, when they are green, and also after they are dried, they are not at all hurtful to cattle. Can you give us the reason why, just at the wilt of the leaf, they are poisonous?

L. Durand.

The poisonous qualities of the cherry are owing to the prussic acid they contain, and of the various kinds of cherry, the Laurel or Bird cherry is the most dangerous. It was from the leaves of this tree that the poison was formerly obtained. While the leaves are fresh, the poison is so diluted with the juices, that it loses most of its energy, and besides, animals cannot eat the same quantity of fresh leaves that they will of wilted ones. The consequence is, they obtain from the wilted leaves a much larger quantity of poison, and that in an undiluted state. In drying the leaves thoroughly, the poison is lost with the other juices; for of all poisons, prussic acid is the most difficult to confine or retain in purity. The numerous instances of the death of animals from eating wilted cherry leaves, should render farmers cautious how they allow cattle to have access to them in that state, or indeed to any extent in any other.

GREENSTONE LANDS OF VIRGINIA.

Messrs. Editors—The Greenstone lands of my neighborhood are the most valuable we have. I have noticed that where marine salt has fallen on this stone, it has hastened its disentegration, and so I suppose would any other salt, whether simple or compound. Disintegration changes the color from green to a bright brown. Will you be so obligingly as to inform me what are the components of this stone? (*a*)

There are in my lands, and throughout my neighborhood, much bog iron ore; and I have noticed that where ever it has been brought to the surface, the land is presently improved by it. Will you be so good as to inform me whether marine salt will oxidize the iron, whereby the improvement may be hastened? (*b*)

There is in my neighborhood a considerable quantity of sulphuret of iron. I have used this after it had decomposed and become copperas, as a manure for tobacco, and found its virtue superior to plaster. We are informed it has been extensively and beneficially used on clover in Flanders. Please inform whether or not this substance is used to any extent as a manure in the United States, and the result? (*c*)

Amherst, Va., June 16, 1843. Z. Drummond.

(*a.*) Those primitive rocks in which felspar, as the main ingredient, is combined with hornblende, or sometimes with augite, are termed greenstone. Their appearance in columnar masses, as well as their injection in veins in other rocks proves their plutonic or melted origin. The peculiar qualities of greenstone soils, and they are usually valuable, is owing to the felspar the rock contains. Felspar is composed when pure, of silica 64 parts, alumina 20, potash 14, and lime 2, in 100. But greenstone usually contains more lime under the form of calcareous spar, and it is evident that the disintegration of a rock so rich in potash and lime, must make a good soil. It is remarkable that felspar, perhaps the most abundant mineral on the globe, should contain about the same proportions of the principal earths that analysis shows exist in the most fertile cultivated soils.

(*b.*) There are two oxides of iron constituting iron ore —the red and the black. Both are insoluble in pure water, and both dissolve readily in acids. It is the first which in boggy land is so injurious to vegetation. But according to Sprengel, Johnston, &c. this red oxide exposed to the air, has the property of absorbing ammonia, and must thus be useful in furnishing it for plants. Salt, by the conversion of the black oxide into the red, might hasten this fertilizing effect, but we have no facts or experiments to determine that such would be the result. All soils containing iron should be frequently moved, kept free from water, and loose and pervious to the air.

(*c.*) The use of sulphuret of iron by Mr. D., is the only instance we have known in this country; yet Sprengel asserts that a subsoil from a bog, containing sulphuret of iron, produced great effects used as a top dressing on grass lands. The explanation given is, that the pyrites absorb oxygen, and is converted into sulphate, and thus reproduces the remarkable effects observed on the addition of gypsum, of sulphuric acid, or of sulphate of soda, to similar grass lands.

CLOVER SEED.

Messrs. Editors—One of your correspondents, in a late no., speaks of farmers sowing clover seed "between the thumb and finger, as if it were gold dust." Now I am well aware that most farmers sow grass seeds too thinly; but where they cost from five to ten dollars a bushel, they *are* almost as precious as gold dust.

What is the reason that farmers in Dutchess cannot raise their own clover seed? If they can, how is it necessary to manage a piece to secure the seed?

If you will be so good as to answer these queries, Messrs. Editors, you will oblige me, and perhaps other subscribers. North East.

We certainly are aware of no reason why as good clover seed cannot be produced in Dutchess county as in Seneca, and believe it might be. There will always be some failures with this crop; but in general, if managed well, a fair yield may be considered certain. Where the first growth of clover is allowed to proceed and head without mowing or feeding, it rarely fills as well as a later growth. In the clover seed districts of western New-York, the first growth is mown *early* for hay, and the second is used for the seed. The growth will not be heavy, but the seeds will be abundant and of good quality. Some feed off the clover in the spring pretty close, and then take a crop for seed. Of the large clovers, this method does well, as they are later than the smaller ones, and require more time to perfect their seeds. With these, waiting for mowing rather hazards the seed crop, and we have found feeding the better way. When the heads of the clover have become dry and brown, it should be cut while the dew is on, and suffered to lie until the chaff and stem have become partially rotted, never stirring it while very dry, as the seeds are easily lost. Clover seed is now usually got out by machines, which not only give a greater yield, lessen the labor much, but render the long and tedious process of rotting mostly unnecessary.

NEW WORK ON FRUITS.

We are gratified in being able to announce that A. J. Downing, Esq. of Newburgh, than whom no individual in the country is more competent to the task, is engaged in the preparation of a volume on fruits, which will, we are confident, be welcomed by every orchardist and fruit grower in the country. There has been so much confusion of names and imperfect descriptions of fruits, in our American treatises on fruits, (and foreign ones are by no means exempt,) that names and descriptions have furnished but very imperfect guides to a knowledge of the fruit indicated, and the purchaser of trees found this to be the case, frequently to his cost. The superior advantages of Mr. Downing, his intimate acquaintance with the subject, and the skill and patience he has brought to the investigation, will doubtless correct these evils, and give the public a work on which both the grower and the tree purchaser may rely with confidence. We give in the present number descriptions, with outline drawings, of five varieties of cherries, and we hope hereafter to follow them up with drawings and descriptions of other fruits from the same source.

NOTICE OF NEW PUBLICATIONS.

"Productive Farming."—This is a popular digest of the recent discoveries in agriculture, and the consequent improvements, compiled by J. A. Smith, and from the press of Wiley & Putnam and D. Appleton & Co., New-York, to whom the agricultural public are so much indebted already. The arrangement appears to be very good, and the volume, a neat duodecimo of 150 pages, is sold at the low price of 31 cents. (A notice of this work, by our correspondent "*Richmond*," will be given in our next.)

Johnston's Lectures on the Application of Chemistry and Geology to Agriculture.—We have received from the American publishers, Wiley & Putnam, New-York, Parts I. II. and III., with the Appendix, of this valuable publication. There is an independence of thinking and a clearness of reasoning in Prof. Johnston's works, that render them attractive and instructive. We perceive he has just been chosen as the agricultural chemist of the Edinburgh University, and that he will do honor to the place, none who read these lectures can doubt.

"The Economy of Farming."—This valuable contribution to what may be termed our agricultural literature, is a translation from the German of Prof. Burger, with copious notes from Thaer, Veit, Sprengel, &c., by E. Goodrich Smith, and published by Leavitt & Trow, New-York. It is a handsome octavo of some 140 pages, and afforded at 50 cents. These Germans are a curious people, the most imaginative and speculative on earth, and yet endowed with a nicety of calculation, a perseverance of purpose, a coolness of judgment, and a patience of investigation, that distances all competitors. We are glad to see this publication. We have had translated for us the great works of Liebig and Sprengel, embracing the German theories of farming; now we have in this translation from Burger, ample details of their practice; the whole interspersed and illustrated with a great variety of tables of the most useful kind. Differing in some respects as the German mode of farming does from ours, (though in a less degree than the English,) it is still sufficiently near to render the statements, tables, &c. very valuable to our cultivators of the soil. We are glad to perceive, in a well written preface, that, should the present issue meet with such a reception from the public as to warrant further translation, the other portions of Burger's works will be given to the public. On the subject of agriculture, there is a mine of riches in the German publications, the exploration of which has as yet been hardly attempted; and we much misjudge the character of our farmers, if Mr. Smith is not encouraged to proceed with his translations. We cordially recommend it to all who wish a compend of a mass of facts of the greatest practical utility.

Thirty Years from Home, or a Voice from the Main Deck.—This interesting volume, published by Tappan & Dennet, Boston, contains the experience of Samuel Leech, who was for six years in the British and American navies; was captured in the Macedonian; entered on board the U. S. brig Syren, and was captured by Medway 74. We notice it here, because having a personal acquaintance with Mr. Leech, we are assured of the general fidelity of his narrative, and because it affords the best insight into life in a vessel of war that can any where be obtained short of actual experience. Since Mr. Leech has abandoned the great deep, he has taken a decided interest in the more peaceful pursuits of agriculture, in which he has become no mean proficient. As a narrative calculated to deeply interest the young, we know of but few works that exceed "Thirty Years from Home;" and as the moral is every where good, we trust it will have an extensive circulation.

The Every Day Book of History and Chronology, by Joel Munsell; Albany, E. H. Pease; 2 vols. of 400 pages each. This is a valuable collection of facts in history and chronology, embracing notices of celebrated persons and memorable events in all ages of the world, arranged under each day of the year, forming a very useful book of reference, to which all may refer with advantage. The author has been several years engaged in making the collection, which is particularly full on all subjects connected with the history and men of our country, and great care has been taken to give the dates in accordance with the best authorities.

The Medico-Chirurgical Review.—This valuable quarterly Journal of Practical Medicine, is regularly republished in New-York, by R. & G. Wood, at $5,00 per annum. Each no. contains nearly 300 pages, close print, embracing a general view of medical practice and science in all countries, and must, we should think, prove invaluable to the medical man.

Blackwood's Magazine.—This well known magazine is promptly issued each month, by J. Winchester, New World office, New-York, in about 20 days after its appearance in Edinburgh. Only $2 a year.

American Sporting Chronicle.—Commend us to our good friend W. T. Porter of New-York, for a journal which will unite the suffrages of all true sportsmen in the country. Not satisfied with giving us the "Turf Register," and "The Spirit of the Times," two publications unrivaled in their way, he has commenced another under the title of the American Sporting Chronicle, which from the comprehensive nature of its plan, and the exciting character of many of its topics, as well as from its fine execution and its cheapness, must have many readers. In the success and spread of all healthy, manly and athletic exercises we shall be glad, but when they degenerate into brutality, and are of a character fit only for the savage state, they ought to be placed under the ban of the severest reprehension. Believing that the Editor of the Chronicle views this matter in the same light that we do, we hope he will not permit his desire to cater successfully for all, to allow much of his columns to be devoted to pugilism, that remnant of barbarism, and practice utterly unworthy an enlightened age. Nothing can be worthy of attainment, the price of which is the surrender of public virtue and public morals.

The Southern Cultivator.—This is the title of a very neat and well conducted agricultural paper, recently commenced at Augusta, Geo. It is published semi-monthly, 8 pages quarto, at $1,00 a year, by J. W. & W. S. Jones.

The Farmer's Cabinet.—This neat and well conducted paper has just commenced its 8th vol. Philadelphia, published by J. Tatem—monthly, 32 p. octavo, at $1 per year.

"The Planter," is the title of a weekly folio sheet, commenced at Columbia, S. C., about three months since, at $2.50 per year. It is ably edited by J. J. Dubose, Esq. and has already done much to aid in awakening the interest which is now felt in that state on the subject of agriculture. The South Carolinians are beginning to realize the necessity of an improved system of culture in their present crops, as well as the introduction of such others as they can grow to advantage. Mr. Ruffin is now engaged in making a survey of the agricultural resources of the state, from which much important information is expected.

STATE AGRICULTURAL CATTLE SHOW AND FAIR AT ROCHESTER.

BEFORE we issue another number of the Cultivator, this great anniversary holiday of the farmers of New-York will have passed; and we allude to it now for the purpose of calling the attention of our readers generally to the time of the meeting, the 20th and 21st of September, and to state that from all we can learn from our friends in the various sections of the state, the Fair will be well attended, and the display such as the farmers of western New-York may well be proud of. As the Show is held in connection with the Mechanics' Association of that part of the state, we can promise all who attend, such a proof of the American mechanics' skill and ingenuity as has been rarely witnessed; and we are glad to say the contemplated arrangements are such that the whole may be seen without confusion, or danger of injury to the articles exhibited. There will be great numbers of beautiful cattle, horses, sheep, swine, &c., of both the improved and the native breeds upon the ground; by examining which, our farmers can satisfy themselves of the great superiority of the improved breeds, and the best domestic animals, over the common race of scrubs, such as in too many instances waste the time and eat out the substance of the farmer. Such opportunities of comparison are invaluable, and should be improved by all. Wheat, the berry of which is this year every where good, will, unless we are much deceived, be exhibited in samples proving that the farmers of the Genesee country have not yet lost their skill in its culture. Rochester is the very heart of one of the best fruit growing districts in the United States, of which we have no doubt the qualities and varieties of fruit exhibited will furnish ample evidence. The arrangements for the exhibition of agricultural implements are of the best kind; and as it is clearly for the interest of the inventor or improver of all such that specimens should be on the ground, we may anticipate in this respect a show of great extent and interest. Our advices, too, warrant such an expectation. The facilities of approach to Rochester are so great, by canals, railroads and the lake, that the conveyance of articles or animals for exhibition will occasion little inconvenience, and we think our Rochester friends may safely calculate on a multitude of spectators. We trust the coming Cattle Show and Fair will exceed those that have preceded it; and that, as in them, no feelings will be awakened but those of increased devotion to the cause of agriculture, and new and still stronger proofs of the utility and advantages of such associations be afforded in the result.

☞ WE learn by a letter from J. M. SHERWOOD, Esq., that most of the railroad companies between this city and Buffalo have consented to transport stock to the Fair free of expense, and there is no doubt that those companies not yet heard from will be equally liberal. The *Auburn and Rochester Railroad Co.* will despatch an extra train from Auburn, and sell tickets for going and returning at half price; and we presume the same liberal course will be pursued by the railroad companies west of Rochester.

FARMING IN MARYLAND.

WE have been favored with a copy of Mr. BOWIE'S Address before the Prince George's Ag. Society of Maryland, at its Fair on the 3d of November last. It is one of the very best addresses of the season. The following are extracts:

IMPROVEMENT OF WORN OUT LANDS.—The last year I manured 30 acres at the rate of 21 cart loads to the acre. I experimented upon six acres; one I cow-penned; one I covered with tobacco stalks; the third I enriched from the stable; on the fourth I used barn yard manure; the fifth was provided for by my piggery, and on the sixth acre I sowed five bushels of fine salt. The result of my experiments was satisfactory as to all. I am not prepared at present to say which was the best, or which will be the most lasting. I am inclined to think the tobacco stalks are the best under all circumstances. This field of 30 acres was not worth $300; it is now valued by discreet farmers at $900. This was done at very little inconvenience to myself, the manure having been hauled out at such times when my crop required not my attention. I have mentioned this to show how easily our worst lands may be improved, and as an encouraging instance of the success of a slight attention to the improvement of land.

ROTATION OF CROPS IN MARYLAND.—In my humble opinion, the proper system of culture to improve land, is to divide a farm into five fields, having one in tobacco, one in corn, and one in grain, and two in pasture; that is, going on turf for tobacco, following that with corn, and corn with smaller grain, and setting down to clover and timothy mixed, taking care in all wet, low spots to sow herd's grass. Thus you have always two pastures, and three after harvest. Stock should never run on young clover during a rainy spell, or when the land is very wet. All stock should be taken in August from the field to be worked the following year. The field should then be cleaned, and if foul, should be fallowed in the fall; but if clean sward, free from weeds, it ought to be turned up early in the spring; and by a deep plowing, and thereafter frequent harrowing, a fine crop of tobacco can be taken off without disturbing the turf.

AGRICULTURAL FAIRS THIS YEAR.

FROM every part of our state we hear the note of preparation for the autumnal meetings of our Ag. Societies; and below we give the time of meeting of as many as have met our notice. It is a matter of gratification to us, to see the extension of a spirit that produces such results, for it is an assurance, that having once broken in upon old usages, having seen and taken note of things that are good,—good animals, good implements, and good articles of home manufacture, they will no longer rest contented out of the career of improvement. Among the Societies intended to foster domestic industry and render us as a nation truly independent, the American Institute of New-York, has labored long and zealously. It is intended that the coming Fair of this Institution shall exceed any thing that has preceded it; and as it disburses the amount paid to the city by the state, there is reason to believe that the Agricultural department of the Institute, will better correspond with the wealth and fine farming of that and the neighboring counties, than formerly. With all our County Societies, the watchword is onward, and we cannot doubt that the meetings of the coming months will give a decided and beneficial impulse to the great cause of Agriculture.

State Fair at Rochester, Sept. 20th and 21st.

American Institute, New-York, commences Oct. 10. Silk Convention, Oct. 12. Plowing match at Patterson, Oct. 16. Breeder's Convention, Oct. 17. Cattle Show, Oct. 18, 19.

Cayuga Co., at Auburn, Oct. 11, 12.

Chemung Co., at Elmira, Oct. 17, 18.

Chautauque Co., at Fredonia, Sept. 29, 30.

Cortland Co., at Cortland Village, Oct. 3.

Columbia Co., at Hudson, Oct. 10.

Dutchess Co., at Poughkeepsie, Oct. 4. Premiums are to be given for the best 5 bushels of Clover, and 15 of Timothy seed, "raised in the county."

Erie Co., at Buffalo, Oct. 11, 12.

Genesee Co., at Batavia, Oct. 4, 5.

Lewis Co., at Lowville, Oct. 11, 12. Address by C. Dayan, Esq.

Orange Co., at Goshen, Oct. 4.

Oneida Co., at Vernon, Oct. 4, 5. Address by B. P. Johnson, Esq.

Onondaga Co., at Syracuse, Oct. 4, 5.

Ontario Co., at Canandaigua, Oct. 17, 18.

Rensselaer Co., at Lansingburgh, Sept. 27, 28.

Tompkins Co., at Ithaca, Sept. 28, 29. A premium of $5,00, offered by Ezra Cornell, Esq., is to be given "for the best experiment in fattening hogs."

Ulster Co., at Kingston, Sept 20.

Wayne Co., at Newark, Oct. 10, 11. In the premium list of this Society, we notice with pleasure that three premiums are offered "for the best and most useful set of *experiments* on the manufacture and application of manures." Premiums are also offered "for the best conducted poultry establishment." Two plowing matches are to be held—one for men, and one for boys.

St. Louis Co. (Mo.) Oct. 24, 25.

Union, (Ill.) at Ottawa, Sept. 27, 28.

Philadelphia, (Pa.) at the Lamb Tavern, Oct. 4, 5.

Windham county, (Ct.) at Brooklyn, Sept. 27.

Hampshire, F. and H. at Northampton, Oct. 19. Address by Wm. Lincoln, Esq., of Worcester.

Newcastle, (Del.) at Wilmington, Sept. 13, 14. Address by Dr. Wm. Darlington of Pa.

ABORTION IN COWS.

WE give the following letter, received by Mr. Prentice of Mount Hope, from Prof. Grice, veterinary surgeon, of New-York, on this subject. Believing that a change of pasture would prove beneficial, Mr. Prentice some time since sent a large portion of his beautiful herd of Durham cows to the north part of the State, whence we trust they will ere long return in a sound and healthy condition.

New-York, June 27, 1843.

SIR—I should have written to you before this, but absence from the city and a press of business have prevented.

After much mature deliberation on the obscure cause of abortion which your cows have been subject to, I think I have arrived at a satisfactory conclusion as to the cause. In taking into consideration the luxuriant state of the soil caused by animal matters employed to effect that purpose, and knowing the decomposition which they undergo, also the new compounds which they form, I hesitate not to say that *ergot of rye* has located itself among the grasses; and as we know it has a specific action on the womb, causing an expulsion of its contents, it has fully confirmed my first diagnosis. I have availed myself of the knowledge of the first chemists: they at first seemed at a loss; but when I suggested to them my views, they unanimously agreed with me. Two opinions have been advanced respecting this substance: my own opinion is that it is a fungus which locates itself on the stems of different grasses. The ergot which is used for medicinal purposes is of a violet color, the inside white. The active principle, it seems to me, resides in its *outer* tunic; and as this may be washed off by the rain, in wet seasons it is not productive of so much mischief.

In giving you my advice, the only plan I could at this moment suggest for the removal of the evil, would be the immediate change of pasture for the cows; also that the lands should be broken up for one season, so that the roots of the grass may decompose, and an entire change be effected in the vegetable process.

THE SEASON, THE CROPS, &c.

Extracts of Letters to the Editors of the Cultivator.

Talbot co. Md., July 31.—"The crops of wheat on this shore are much injured by red rust." M. G.

Derby, Ct., July 31.—"We have in this region, for the past two months, suffered from the great drouth. Our hay crop, on upland meadows is not more than half a crop, as estimated by our farmers. Rye in this town, in some pieces is good; while in others is hardly worth harvesting; owing, as is supposed by many, to the hard frost which we had the first of June, which froze it when in the bloom. Oats in this region are short stemmed, owing to the drouth, but the grain pretty well filled. Corn and potatoes more or less generally injured by the drouth. Yesterday and last night we have had a fine rain, which has been the only rain to wet the ground since the first of last June." L. D.

McConnellsville, O., July 29.—"Crops of wheat light; a poor prospect for corn, oats, potatoes, &c. &c. on account of the extreme dry and hot weather." W. H.

Macon co. Ala. July 15.—"This has been an extraordinary year for planters; a very cold and backward spring, some two or three very considerable falls of snow in March, with a great deal of rain. This entirely destroyed the first planting of corn, which had to be planted over again. The rains set in before planters cleaned out their crops, commencing about the 8th June, and they have had their hands full since. It rained constantly, and frequently in torrents, till about the 4th July. Nothing will save the planter but a late fall and good season from this forward, which may give them half crops of cotton. The corn crop is pretty fair. The *grass* and *weed* crop full to *overflowing*." N. B. C.

Holmes co. Miss. July 21.—"I have the pleasure of sending on to you again, another $5 for six copies of the Cultivator. The amounts I send are small, but I will try and send them often. I am anxious for each planter to enjoy the benefit of the Cultivator, therefore I do not wait to obtain a large sum before sending on. Several of our planters are experimenting on Dr. N. B. Cloud's system of raising or planting cotton, and I have no doubt, if they pursue to the letter, "his plan," they will succeed well, at least better than they have heretofore done. All our planters cultivate (or rather try,) too much land, from sixteen to twenty-two acres to the hand; say ten of cotton and eight of corn. Our crops generally bid fair to make plentifully, and most of planters have heavy crops on hand." A. M. M.

Log Hall, Miss., July 23.—It is too early to give any sure opinion as to the present crop—the cotton crop especially; it is as uncertain a crop as ever was planted in any country, and as the most critical part of the season has yet to come, the present prognostics should be received accordingly. Generally speaking, there is much complaint; many do really believe they cannot make an average, while others think much less will be made. From what I have seen, I think it will be fair; should we have dry weather for two or three weeks, this will not be; because for six weeks to two months it has been reasonable, yea! wet; and if it turns off dry, the cotton must cast (or shed,) its forms greatly, there being a very light early crop; this must cause a failure. My own prospects are excellent—cotton good, and two acres more to the hand than ever before. Mine has had advantages; it has never suffered by the grass, and is now lain by, while others have been and are even now in the grass. Crops of corn are good." M. W. P.

Adams co., Miss., Aug. 10.—"In this part of the cotton country we have fine crops of corn; in the opinion of the wiscacres, we have had too much rain for a good cotton crop; it is opening very slowly, and any prediction as to the extent of the crop, might be considered hazardous. I fear though, we shall make more than we shall sell well." H. A. G.

New-York, Aug. 1.—"I have just returned from a tour through Pennsylvania, Maryland and Virginia. The wheat crop, I think, is little more than half as heavy in the straw as last year; but the grain is of better quality, and probably about three-fourths as much in quantity. Corn, though unusually late, has a very healthy growing appearance, and promises a pretty fair crop. Oats I have never seen shorter. I don't think that from here to the interior of Virginia, there will be more than half as many oats as last year; and the crop of hay, I think is about two-thirds as good as last year." L. F.

Muskingum co. O., Aug. 8.—"We are at this moment having a fine rain, after a most severe drouth, which has inevitably cut off corn and potatoes to less than half a crop. Wheat proved very light, not more than half a crop through the middle and southern regions of this state; but in the eastern and more northern portions it was much better." S. H.

Bunker Hill, Ill., July 24.—"Wheat crop in many parts a total failure, and what remains is blasted." J. A. P.

Chester co. Pa., Aug. 11.—"Wheat here in general is good; oats is short; hay crops are lighter than usual; corn is unpromising, owing to the severe frost on the 2d of June." J. M. H.

Onondaga co., Aug. 19.—"The drouth here is very severe, and will have a bad effect on the corn crops, unless it rains speedily. Potatoes are past recovery. It is a little damp and cloudy to-day, and we hope for rain before all is over." W. G.

COLUMBIA HORT. SOCIETY.—We believe our good friends in Columbia county, can boast of the most efficient Horticultural Society in the state. Their general exhibition for this year will be held at Hudson, Sept. 21, 22, 23, when over $100 will be distributed in prizes.

Prize Essay.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD,
Associate Editor of the Cultivator.

INTRODUCTION.—Of all the pursuits to which mankind, from necessity or inclination, have devoted themselves, there is none more honorable,—certainly none more useful,—than that of agriculture. To pursue this business successfully, knowledge, extensive and varied, is required; for, although a man may succeed by following the beaten paths of his predecessors, occasions will frequently arise, when the end desired may be attained by methods much shorter than those usually adopted, if the farmer is able to form and apply them. It is here that science has, within a few years, rendered the most essential aid to agriculture. Sometimes, reasoning from well known effects to their causes, the agricultural chemist has placed in the hands of the farmer the means of producing results, always desirable, but which, under the older systems of farming, with his utmost care, he frequently failed of obtaining. Again, taking well established facts in animal or vegetable phisiology as his starting point, he has arrived at results of the highest practical importance, and is enabled to render more certain and effective the more tardy operations of nature. In no department of agricultural industry, it is believed, have the labors of science been more beneficial or more apparent than in that of the preparation and use of manures; certain it is, there is no department more deserving attention, or where an elucidation of the principles and laws that govern the growth of plants, acts with a more direct and energetic influence.

DEFINITIONS.

A definition of the term manure, may be necessary, in order to treat the subject understandingly, as different individuals use the word in widely different senses, some in a wide, and some in a limited one. A few instances of the meaning put upon the term will be given from a few of the modern writers who have adverted to this topic. Thus Dr. Leiber, in his German Conversationes Lexicon, defines manure to be "vegetable, animal and mineral matters, introduced into the soil to accelerate vegetation, and increase the production of crops." The Encyclopedia, published by the London Society for the Promotion of Useful Knowledge, thus defines it:—"Every substance which has been used to improve the natural soil, or to restore to it the fertility which is diminished by the crops annually carried away, has been included in the name of manure." Loudon, in his great work on Agriculture, says—"Every species of matter capable of promoting the growth of vegetables, may be considered as manure." Prof. Low, in his Elements of Agriculture, says—"All substances, which when mixed with the matter of the soil, tend to fertilize it, are in common language termed manures." Mr. Johnson, in his "Farmer's Encyclopedia," lately published, says—"A manure may be defined to be any fertilizing compound or simple ingredient added to a soil, of which it is naturally deficient." The definitions of Prof. Liebig and Dr. Dana, two of the latest writers on the subject, do not differ essentially from those already given. Of these definitions, I prefer the most simple and comprehensive, that of Loudon, and in this paper shall consider the term manure, as embracing every substance capable of promoting the growth of plants.

CLASSIFICATION.

Manures, by some, are classed as earthy, organic and saline; others divide them into animal and vegetable, mineral and mixed manures, and some speak of them as composed only of geine or humus and salts. Others class them as organic and inorganic; but these divisions are of little consequence, as every farmer understands that manure is the result of decomposition or change; and that, whether organic, that is, derived from animal or vegetable matter; or inorganic, such as the earths, clay, lime, the alkalies, &c., it is only efficient when presented to plants in certain forms, such as decomposition, division or solution. In France, they have terms to distinguish those substances which act mechanically in improving the texture of the soil, from those which act directly in the nourishment of the plant. The former class of substances they call *amendements*, and the latter ones *engrais*. It is probable, however, that the system which considers all manures as consisting of humus or geine, and salts, comprehending, in the latter term, all the mineral substances that enter into the growth or nourishment of vegetables, will eventually be found the most simple, and at the same time the most accurate of all the proposed divisions of manures. Thus humus constitutes the source of the carbon, forming the principal part of the structure of plants, and the salts, where they do not enter into the structure of plants, are active in preparing the other inorganic elements, and exciting the vegetable organs in their reception and appropriation of nutriment.

HUMUS OR GEINE.

Humus or geine is simply decomposed animal and vegetable matter; and as from it, by the action of oxygen, carbonic gas is derived, to be absorbed by water and taken up by the roots, or mixed with the atmosphere and taken up by the leaves of plants; or, as some agricultural chemists with good reason suppose, is under certain circumstances dissolved, or is soluble, and thus rendered fit for immediate nourishment to plants, it must be considered the most important item in the production of manures. The salts, which are the most efficient in aiding vegetation, or the most active manures, are those formed from the alkalies and their various combinations. Thus, from pure lime or calcium, is formed, by the union with carbonic acid, *carbonate of lime;* with phosphoric acid, *phosphate of lime,* the base of bones, one of the most efficient of fertilizers; with sulphuric acid, *sulphate of lime,* or gypsum, the value of which is well understood; and so with the other alkalies, which, in their combinations, form substances of the utmost consequence to plants. It is well known that the outer covering of some kinds of cane, contain so much flint or silex as to strike fire with steel; and some of the grasses contain this substance in such quantity that their ashes will melt into glass with potash. Now, this hardness, so necessary to their perfection, could not be attained unless this flint had been rendered soluble by union with an alkali, forming a silicate of potash, and by this solubility been rendered fit for the action and appropriation of the plant.

FOOD OF PLANTS.

If we would know what kind of food is required by plants, one of the first steps necessary is to ascertain of what the plants themselves are composed. The combinations of matter may be said to be absolutely endless; but the original elements of this multitude of combinations, are few in number. Chemistry has detected only some fifty-five substances incapable of further reduction, or what are called simple substances; and of these, strange as it may appear, only four, except in proportions merely accidental, go to the formation of plants. Of these the first is *Carbon.* This forms from 40 to 50 per cent by weight, of the plants cultivated for food; and is therefore most important to animals and to man. The second of these simple substances, is *Oxygen.* The quantities of this substance are immense; and though we are acquainted with it only in the form in which it exists in the air, nearly one-half of the solid crust of the globe, 21 per cent of the atmosphere, eight pounds in every nine of water, and more than one-half of the living bodies of all plants and animals, are oxygen. *Hydrogen* is the third substance peculiar to plants. This is the lightest of known substances, and forms a small part of the weight of all animal and vegetable bodies; constitutes one-ninth part of the weight of water, but enters into the composition of none of the masses that go to form the crust of the globe, coal excepted. The fourth simple substance, entering into the formation of plants, is *Nitrogen.* This forms 79 per cent of the bulk of the atmosphere, constitutes part of most animal and some vegetable substances; is found in coal to the amount of one or two per cent, but does not exist in any other of the mineral masses constituting the crust of the globe. Although not an abundant substance, the importance of it is not the less decided, and some of its functions are of the most indispensable kind. Plants then, are composed of carbon, oxygen, hydrogen, and nitrogen; the first derived from carbonic acid, the second from the atmosphere, the third from the decomposition of water, and the fourth from ammonia absorbed by water, and taken up by the roots of the vegetables. Some of the earths are occasionally detected in plants, and salts of some kind are always present. In the preparation of manures, the principal object to be aimed at, it is evident, must be to supply the materials needed to furnish the carbon and the ammonia; and these are found in the greatest abundance in dead or decomposed animal and vegetable matter.

LAW OF NUTRITION.

It seems to be a law of nature, that the higher the grade of the animal, or the more complicated its organization, the greater the necessity of a corresponding degree of organization in the substances used as food; indeed the manner in which the crude materials, found in the earth and atmosphere, are worked up by plants into a state suitable for conversion into the flesh of animals or food for man, exhibits the strongest proofs of benevolent design in the formation of such grades of organized matter. Man can, indeed, live on plants, but his teeth demonstrate that flesh was to constitute no inconsiderable portion of his food. As all animals receive their food, either directly or indirectly, from the vegetable kingdom, it is evident their excrements, or their decomposed bodies, must form manures of the most valuable kind; and it is to this source, the excrements of animals, that the farmer must look for his supply of manures to restore the fertility of the soil. In treating further of manures, it will be best to begin with this, as the most important class.

ANIMAL MANURES.

A late British writer on agriculture, says:—"The chief use of cattle on an arable farm, besides those necessary for the operations of husdandry, is to produce manure for the land. If the cattle repay their food, and the expense and risk attending their keep, the manure is sufficient profit. Even with a moderate loss, they must be kept, when manure cannot be purchased. The loss, if any, on the cattle, must be repaid by the increase of the corn crops. Manure is to a farm, what daily food is to an animal; it must be procured at any sacrifice." Common barn-yard or stable manure is the kind to which most farmers must look for the fertility of their farms. This consists of the droppings of the cattle, mixed with the straw used for littering in stables or thrown into the yards for the animal to feed or lie upon, the coarser hay and weeds refused by the stock, and the urine of the animals kept in the stables or yards. This is constantly trampled, is usually kept moist if not wet, and is finally decomposed, or converted into manure fit for the production of crops. This is the most usual course, but it is evident that there must, in this method, be a serious loss to the farmer, of the more valuable properties of the manure. In this way, the decomposition is unequal; a part will be converted into mold while the other will be scarcely acted upon; the salts and the more soluble parts of the excrements, which are the most efficient ones, are dissolved by the rains, and carried off by the drains, or lost in the earth; and where any considerable degree of heat is evolved, as there will be when the decomposition is rapid, or is going on in large masses, the escape of ammonia, so easily detected by the smell, shows that the nitrogen, so essential to the growth and perfection of a grain crop, is rapidly wasting.

PREPARATION.

To prevent these results, and secure the whole benefit of the manure, two methods have been adopted. The first consists in applying the manure fresh, or in a long state, to the fields it is wished to manure, without waiting for it to decompose. In this way the manure collected in the yards during the winter, is removed in the spring, and applied to such crops as require it the most; and as no fermentation ensues in ordinary cases, until the commencement of hot weather, two sources of loss at least are avoided, those of the washing away of the soluble parts, or their being carried off in the shape of gas. Where there exists no necessity for retaining manures for other than spring crops, and where the crops cultivated are such that long manures are suitable for their growth and tillage, this mode of disposing of manures must be considered one of the best that can be adopted. But in many cases the formation of manures in the yards and stables of the farmer is going on the whole year; and preservation in masses, or by being scattered in yards during the hot months, would be to greatly lessen, if not mostly destroy its value. Besides, there are some crops, such as some of the root crops, in the cultivation of which experience has proved fully that rotted or decomposed manure is far preferable to long manure, as much of it is already in a soluble state, and is available to the plants at the time they need hastening the most, which is the period immediately after germination. When the waste of manure is to be prevented during the summer months, or it is desirable to provide a quantity of fully rotted manure, then the second method should be used; and this indeed, by many excellent farmers, is considered the best in all cases.

FERMENTATION.

In this method, the practice is to remove the dung from the stables and yards at short intervals, and place it in large piles or masses, that the proper fermentation may take place previous to its use. When a pile of manure is made in this way, the fermentation takes place in the quantities applied, as they are successively deposited, and therefore does not reach usually that point in which material loss is sustained. If it is found that the heat is becoming too great, or the fermentation injuriously rapid, so as to cause the escape of ammonia, a layer of earth or sods placed over the pile, will retain, by combination, the escaping gases, and thus prevent the loss. It has been found a most excellent plan, one which not only greatly increases the quantity of manures made in this way, but adds to its quality, to mingle with or cover the successive deposits of manure with earth from ditches or ponds, peat or muck from swamps, or turf from bogs or plowed lands, as such layers, consisting mostly of vegetable or animal matters, will, by absorbing the drainings of the manure, or the absorption of the escaping gases, be converted into one of the most efficient of fertilizers. The more solid such deposits of manure are made, the more slow will the fermentation be, and hence in unloading, the carts or wagons may be driven over them if necessary to expedite the work, where the immediate use of the manure is not an object. Should the dung placed in these heaps be too slow in fermenting, it may be hastened by opening the piles, or still better by making holes in the top, into which the wash of the yards and the urine of the stables may be poured. This method has another advantage. The manure from the yards, if not wanted as long manure, may be removed to the fields where it is to be used, at times when the men of the farm cannot be otherwise profitably employed, and will be at hand, ready fermented in these piles, when a further transportation might be difficult if not impracticable.

LONG OR ROTTED.

It is a question of considerable importance to the farmer, and one which has been much discussed, whether it was better to apply manure in its long state always, or or always allow its full decomposition before using. From his own experience, the writer has been led to doubt the correctness of either of these positions. It seems to be universally admitted that matter, to be efficient as a manure, must be soluble, and it is clear that the more solid parts of farm yard manure require to be softened by putrefactive fermentation before they can be considered in this state. Where, then, the influence of manure is required to be felt at once, as on the turnep, beet or carrot crops, in order to push them forward at the first start beyond the reach of insects, my experience is, that the manure should be in a state reducible to powder, in which condition a large portion of it may be expected to be soluble, and of course at once available by the plant. Where, during the fermentative process, the mass has been reduced to a black carbonaceous matter, it may be inferred that the heat was too great, and the manure seriously damaged; on the contrary, if the mass, while perfectly fine, dry and friable, still retains its dark brown color, it will usually be found that none of the good qualities have been lost by over-fermentation.

But where the manure is to be applied to crops which do not require forcing forward in the early part of their growth, but demand as much or perhaps more nutriment at a late period of their vegetation to perfect their seeds or roots, then experience has shown that it is best to apply the manure without any considerable fermentation to the soil. Indian corn, potatoes, and the grain crops generally, are of this class; the two first particularly. The time when corn and potatoes require the most nutriment, is at the time when the ears and tubers are forming; and when manures but partially fermented, or used fresh from the yard or stable, are applied, the decomposition is comparatively gradual, and the supply greatest when most needed. I cannot recommend the application of manures of any kind directly to grain crops, as it has a tendency to give straw at the expense of the grain, and wheat so manured, is far more apt to suffer from mildew or rust, than when the manure, by application to other and previous crops, has become perfectly incorporated with the soil. In this state, that rapid growth, which is the result of first fermentation, is avoided by the wheat plant; and the substances necessary to perfect the berry are already prepared and within reach of the growing or maturing plant.

Dung varies much in its quality, not only from the perfection or imperfection of the fermentation to which it is subjected, but also from the animals producing it, and the food which animals receive. The richest and most effective manure we have ever used, was that from the hog yard, and produced by fattening hogs. That from cattle, fed on corn meal and oil cake, will be little inferior; and either will be found 100 per cent better than ordinary farm yard manure. The reason of this is very plain. Such animals are fed with substances abounding in the materials most needed by plants, with very little admixture of useless matter, and the comparatively small quantities of animal matter and salts added, rather contribute than detract from its efficacy. The dung of sheep is more valuable than that of horses or cattle not fattening, as the materials are more perfectly assimilated or mixed in mastication, and more fully decomposed.

GREEN CROPS.

Next to farm yard manures, to keep up the fertility of his lands, the farmer may most certainly rely on green crops, either fed off upon the land, or turned under by the plow, and there allowed to ferment and decompose. For a plant to enrich exhausted soils, affording as it does both top and roots to a large extent, there is no plant equal to clover; and particularly where it is necessary or desirable to have the green crop fed off by animals. I prefer letting the clover grow until nearly or quite in blossom, and then turning sheep upon it. They will eat much of it and fatten rapidly; but they will trample down more, and this, mixed with their dung, forms in its decay a most efficient top dressing; and repeated for two or three years, forms an admirable preparation of the soil for wheat or other grains. When a crop is cultivated to be plowed in, it should be done at the time when the plants contain the greatest quantity of nutritive matter. and have least exhausted the soil in which they are growing. This, in most cases, will be when the plants have come fully into flower. At an earlier period there may be as much weight, but a larger portion of it will be mere water; and, if allowed to stand much later, the soluble matter is lost in the seed, and the ligneous part of the stem becomes more difficult of decomposition. Buckwheat is a good plant for a green manure; its growth is rapid, and gives a great weight per acre, and two crops may be plowed under in a year. The best way of plowing in such green crops, is to pass a heavy roller over them, which lays the plants close to the ground, and greatly facilitates covering them by the plow. It is believed that corn, sown broadcast, and when just showing its tassels, cut and covered by the plow, would be one of the best crops that could be chosen for this purpose. A man or boy, in this case, would be required to follow the plow, to place the corn in the furrow for covering, at the next passage of the plow. Taken at this time, corn abounds in nutritive matter, and could scarcely fail of proving a first rate fertilizer of the soil.

PEAT.

A variety of decomposed vegetable matters, or those partially decomposed, are used as manures. The fallen leaves of trees are of this class; but the instances are few in which they will repay the expense of gathering; perhaps never, in the United States, where the other sources of an abundant supply of manures are so numerous. If collected, the best method of using them, is to litter stables, or form beds for pigs, or mix at once with other manures; as, in such ways, they absorb urine and other fluids that might escape, and together undergo decomposition. But the most important source of decayed vegetable matter, and one, the value of which is not yet by any means sufficiently understood or appreciated, is to be found in the great deposits of this substance in swamps, low meadows, and peat bogs, in all parts of our country. On the subject of this kind of manure, there is no authority equal to Dr. Dana of Lowell, Mass. According to him, peat consists of soluble or insoluble geine or humus, with a few salts. From an analysis of ten specimens from different parts of Massachusetts, the highest and the lowest in the scale of soluble geine, is selected and given here, as well as two specimens of pond mud. This is done, as the value of neither peat or such mud is sufficiently appreciated by the farmer; and they are neglected when they might easily be made a source of the greatest fertility:

	Soluble Geine.	Insoluble Geine.	Total Geine	Salts and Silicates.
Peat.	10.15	49 45	59.60	40.40
	48.80	43.60	92.40	7.60
Pond Mud.	5.10	8.90	14.	86.
	8.10	6.50	14.60	84.40

COMPARISON WITH COW DUNG.

In his analysis of various manures, he takes for his standard, cow dung; and it is not a little remarkable that the constituents of peat and cow dung, should so nearly coincide. Dr. Dana's estimate of the several parts of peat of average quality, and of cow dung, is as follows. The peat was fresh dug, in this case; before, it was dried at 300°.

	Peat.	Cow Dung.
Water,............	85.	83.60
Salts,..............	1.	95
Geine,.............	14.	15.45

PEAT COMPOSTS.

But notwithstanding this decayed vegetable matter is so rich in the organic elements of plants, experience proves that, applied in its natural state, it is almost valueless as a manure, compared with stable manures; and hence the reason it has been so little prized. Science has shown the cause of this result, and the means of obviating it; or, in other words, of unlocking the fertilizing powers of these vegetable deposits. To be able to give out ammonia, the peat or swamp muck must be fermented; and this may be effected by the direct addition of alkalies, or by making the peat into a compost with fresh manures. If alkalies are added, the quantity necessary to bring a ton of fresh peat into the same condition, so far as regards ammonia, as cow dung, would be "92 lbs. of potash, 61 lbs. of soda, or 16 to 20 bushels of common house ashes." But the farmer will usually find the best method of using peat, will be to combine the peat with manure, by mixing it with dung in his yards, or making it into compost. Many experiments have been made by some of the best farmers and gardeners of Massachusetts, in relation to the use of peat; and all unite in pronouncing it most valuable. Mr. Phinney of Lexington, says, that "a cord of green dung converts twice its bulk of peat, into a manure of equal value to itself; that is, a cord of clear stable dung, composted with two of peat, forms a manure equal in value to three cords of green dung." Mr. Robbins of Watertown, though owning a large stock, makes no use of their manures. These he sells; but keeps his farm in a high state of fertility, by mixing swamp muck or peat with spent ashes from his soap and candle factory. The proportions he uses are, one part of spent ashes to three of peat, dug up in the fall and mixed with the ashes in the spring. After shoveling over two or three times, it is spread and plowed in. The effect is felt at once; and so far the manure has proved durable.

(To be continued.)

EARLY AMERICAN AGRICULTURAL WORKS.

We have before us the volumes that record the labors and results of the first Agricultural Society of this State, and propose to give some notice of these, and also of the Memoirs of the Philadelphia Board of Agriculture. Of the first, there are four volumes; the first printed previous to 1800, and the last in 1816. By the Philadelphia Society, several volumes were published, commencing in 1810; and in both these series of volumes the farmer will find much to interest and instruct. He will be gratified at the positive evidence they afford that the practice of agriculture has made decided progress in many things since these volumes were produced; and he will hardly escape a feeling of mortification that, with the increased advantages agriculture now possesses, it should not have been still more rapid. Some things now deemed of the first importance to successful culture, he will find scarcely noticed; while other things, many are accustomed to consider new, he will find were then old.

We shall notice the Philadelphia proceedings first. It is evident that Judge Peters was the soul of the Society,— the most active, if not the most intelligent of its members, although it numbered among its supporters nearly all the prominent men of the state.

Lime, or its use, at that time, as well as at present, furnished a fruitful theme of comment and controversy; the great battles being fought on the subject of caustic and magnesian lime, and there is little probability such controversy will be soon ended. A better knowledge of the nature of soils and the action of alkalies, would seem to be required for such a result.

The *Peach tree* was frequently diseased at that time, but we should think not so generally as now. In the 2d volume, Mr. Phillips, to remedy these evils, proposes to dig around them thoroughly, and strew lime liberally on the surface. He gives a flattering account of the success of his treatment.

Hedges excited much attention at that time, and many papers are devoted to the subject. Most of the plants recommended, have since received fair trials, and have been found unfit for use. Indeed, it may be questioned whether any good hedges have been produced from American plants, unless those from the buckthorn must be excepted. Still, this should not deter from further experiments on a subject of such importance.

Harrowing Wheat in the spring, is strongly urged and recommended. The breaking up the cake or crust formed by the winter, and the destruction of the insects and vermin sheltered under it, are among the principal reasons offered for the practice.

There is a well written paper on the culture of *Indian corn*, by Mr. Lyman. One third of his field he planted in hills two feet apart each way; another third 3½ feet each way; and the other 3½ feet between the hills, in rows 6 feet apart. Three kernels were planted in each hill. The two first parts were suckered, the last was not. In each part only two stalks were left in a hill. Leached ashes were applied to all the hills. The results were respectively 105, 98 and 85 bushels per acre. For this crop he prefers wood ashes to gypsum, whatever may be the soil.

Mr. Preston has a paper on the *Apple tree*, in which he endeavors to prove from the history of old apple trees found in Pennsylvania by the first settlers, and supposed to be more ancient than the arrival of Europeans in the country, that the apple tree is a native of this country. The facts stated are interesting, though the inference may be doubted.

Mr. Taylor (Arator,) of Virginia, has furnished several papers on *Gypsum*, and its value in connection with clover, as a renovator of the soil. The practice recommended by Mr. Taylor, was to sow clover after Indian corn, to exclude all animals, and allow the crop of clover, which was to be plastered annually, to rot upon the ground for three years, by which time it would produce a fine crop of wheat, to be followed by corn and clover. Clover and plaster is as highly prized now as then, as a renovator of the soil, but a better method is found to be to let the clover first attain a good growth, and then feed it off upon the ground by sheep. In this, not only a large accession of vegetable matter is gained by the soil, but a supply of azotized matter from the animal excretions.

Judge Peters was the first to propose in these papers the establishment of an *Agricultural Warehouse and Seed store;* and the plan then deemed so novel and doubtful, has become one of the most necessary and successful aids of good husbandry. This is only one of the many proofs that in correct opinions on the subject of farming, and the best means of improving it, Judge Peters was much in advance of the age generally.

General Armstrong, then Minister at Paris, sent over specimens of various grains, seeds, &c. to the care of the Society, some of which have proved of much value. He also sent to the Society a plow with two shares, but on trial it was found inferior to an American constructed one intended to perform the same work.

Judge Peters has some notes on a paper by Col. Pickering, on the *Mildew of Wheat*. The Judge attributes, and correctly we have no doubt, the appearance of this disease very frequently to the use of hot and fresh dung. This gives a forced growth to the straw by over stimulating the plant, and besides affords a nidus and shelter for insects. Fully rotted compost he prefers for wheat.

Mr. Young of Delaware, has a paper on the value of *Oats as the means of ameliorating a sterile clay soil*, impoverished by bad culture or neglect. Such soil he plows in the fall, putting on such manures as can be procured on his farm, and turning under all briers, weeds, &c. he can collect. On this, in the spring, he sows oats which are pastured on the ground, and never allowed to perfect their seeds. By repeated successions of such sowings, he soon converts his clays into rich mold, and then produced wheat and other grain crops with the greatest success.

John Lorain, well known as a valuable writer on agriculture, has a series of papers on mixed husbandry, soiling cattle, cultivation of corn and potatoes, &c. Some of his opinions have been sustained by experience, but others have been rejected. The saving in soiling cattle, and the extended culture of corn and roots recommended by him, show that he was in advance of farmers generally on these subjects.

In a paper on the different breeds of *Sheep*, by Judge Peters, he decides in favor of the Tunisian or broad tailed sheep, as the farmer's sheep. The reasons assigned are, that their mutton is superior to all others; that they are very hardy, and free from the disorders incident to other breeds of sheep; while their wool is inferior in quality only to the merino breeds. Public opinion, however, did not second Judge Peters, and the Tinusian sheep are now almost or quite unknown in this country. In a letter from Mr. Parry of Bath, Eng., the novel idea is advanced, "*that each filament of wool is a cone, with the apex next the skin.*" Consequently, the coarsest part is at the extremity, and the finest nearest the body. We must be permitted to doubt the entire correctness of this position.

The advantages, and the consequent necessity of a frequent *change of seed*, are well set forth in another essay by Judge Peters. That this necessity might be obviated by proper care in selection, he does not deny, and instances the case of Mr. Cooper of New Jersey, one of the most successful of grain growers, who never changed his seeds, but was remarkable for the attention he gave to their selection and quality. Our experience would be altogether in favor of a change of seeds; and in this most farmers we believe will agree with us.

We take leave of the subject here, merely remarking that the Memoirs of the New-York Society will form the subject of another paper; and that it will scarcely have escaped the notice of the reader, that on the important matters of reclaiming wet lands, thorough draining, the cultivation of turneps, subsoil plowing, &c. not a word is said, leaving the legitimate inference that they were comparatively unknown.

Look out for ready ground Coffee.—Our readers are probably some of them aware that coffee packed in papers, and ready for immediate use, is to be found at many of the groceries and shops of the dealers in such articles. Occasionally a good article may be offered; but to show of what a large portion of this ready prepared coffee is made, we make the following extract from the London Shipping List: "It has been ascertained that sawdust from mahogany, to the amount of more than 300 tons, has been used in the adulteration of what is called ready prepared coffee."

Original Papers from Contributors.

PAULAR MERINO SHEEP.

MESSRS. GAYLORD & TUCKER—In a communication published in the February no. of the Cultivator, page 38, in answer to Inquirer, in reference to the Paular Merino sheep, and the feed which mine received, I said I was making soome experiments in feed, the results of which I would communicate to the readers of the Cultivator. My present object is to redeem that pledge.

My flock was divided about the first December, into four lots.

No. 1, fed corn, at the rate of 2 qts. to 32 sheep.
2, " oats and corn " 3 " "
3, " oats, " 4 " "
4, " cracked corn; that is, corn taken to the mill in the ear, and cob and corn ground together. They were fed on this meal at the rate of four quarts to 32 sheep, a part of the winter, and the remainder of the time on buckwheat bran, and the coarsest of the flour—the finest being kept for family use—at the rate of 6 qts. to 32 sheep; each lot were fed otherwise alike.

The result is, they have all wintered well. There was no perceptible difference in spring. The ewes have done equally well in rearing lambs; as I have now from my 62 ewes, which are of sufficient age to rear lambs, 62 thrifty lambs. They were all tagged before turning them out to grass; taking from each, as near an equal quantity as possible. They were all washed the same day; my men were two days in shearing them. The wool was done up and weighed in presence of several gentlemen, who pronounced it *very* clean. From the 62 breeding ewes, and 27 yearling bucks and ewes, and 1 stock buck, in all 90, the following is the result, as taken from minutes made at the time:

Lot No.	1, 16 sheep,	fed corn, ...	84 lbs.	2 oz.
"	2, 16 "	corn and oats,	91 "	1 "
"	3, 37 "	oats, ...	190 "	6 "
"	4, 21 "	ground feed,.	113 "	0 "
	90		478 "	9 "

Being but 2 oz. less, on the whole flock, than 5 lbs. 5 oz. per head.

Those fed corn and oats, it will be noticed, gave the heaviest fleeces, but these, were very young bucks. The other three lots were all ewes, of different ages, and nothing in the sheep, which should give the preference to those which gave the heaviest fleeces, which are those fed on ground feed.

From the results of this experiment, I am led to believe that it is better to grind feed for sheep, as well as other animals. I intend to renew my experiments the next winter, and hope other sheep owners will do the same. I find an increasing demand for my Paular Merino Bucks, having already supplied several orders from different parts of this state and Ohio, the present season.

Permit me to say to your correspondent. Mr. J. R. Speed, who has given us an account of his flock of selected Merinoes, in the July no. of the Cultivator, that he has, in my humble opinion, acted wisely in rejecting the Saxony, and commencing a flock with Spanish Merinoes. I cannot imagine how any man can afford to keep sheep, which will yield from two to two and a half pounds of wool only

I think also with Mr. S., that the weights of the seven fleeces, an account of which he gives, are certainly "very clever." But he has not arrived "at the top round of the ladder" yet.

If he will take my word for it, which can be substantiated by several credible witnesses, who saw them weighed, I have had taken from the same number of ewes, and one yearling buck, fleeces which weighed as follows:—6 lbs. 10 oz.; 6 lbs. 9 oz.; 6 lbs. 4 oz ; 5 lbs. 15 oz.; 5 lbs. 13 oz.; 5 lbs. 12 oz., and one yearling buck, 6 lbs. 12 oz., total 43 lbs. 11 oz. An average of 6 lbs. 4 oz. of clean washed wool, exclusive of tags. These were, of course, my heaviest fleeces.

Nor need Mr. S. fear, if he has got the right kind of Merinos. They will give as large a yield of wool, when hundreds are kept upon a farm, as when tens only are kept, provided they have proper feed and attention.

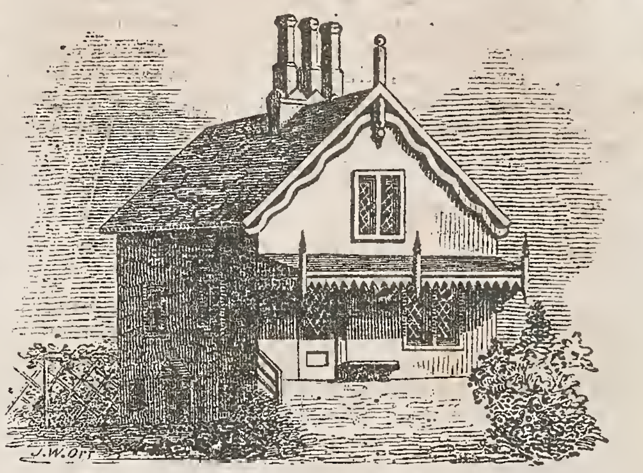
Very respectfully, R. A. AVERY.

Galway, Saratoga co. N. Y., Aug 7, 1843.

ACID IN SOILS.

THE following may prove an interesting fact to those engaged in the investigation of this subject. Nine years ago, Dr. Button of Newark, Wayne county, N. Y., laid down in a ditch about two feet deep, a lead pipe for the conveyance of the water of a spring, on a hill distant about 150 rods from his dwelling house, to which the water was brought. The water flowed freely till the last spring, when becoming obstructed, the pipe was examined. Large portions of it on the hill side below the spring, were found much corroded, in some places quite through the pipe, which caused the obstruction. On this hill side, sorrel (*Rumex acetosella,*) grew in great abundance, and generally the most so near the corroded parts. No sorrel grew on any other part of the ground where the pipe was laid, and no other part of the pipe was in the least degree affected, but appeared as when first laid down. J. J. T.

Macedon, 8 mo., 1843.

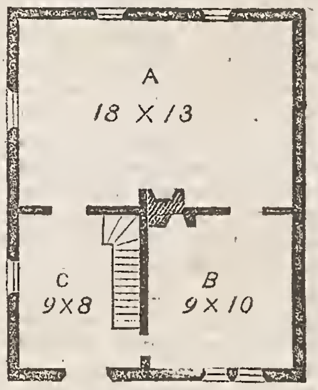


LABORING MAN'S COTTAGE.—(Fig. 64.)

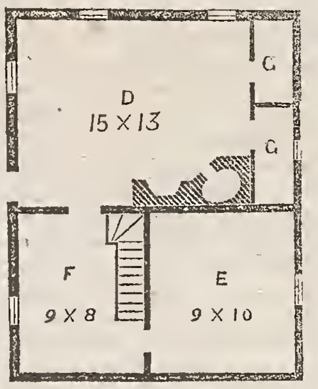
MESSRS. GAYLORD & TUCKER—I herewith send you a design for a Laboring Man's Cottage, somewhat after the old English style, with heavy projections and ornamental barge boards. I have given it the benefit of a piazza, by throwing out a roof on brackets, without the cost of the floor and supports, thus getting a shelter from sun and storm with little expense, and I think in a way calculated to please the eye. All that is ornamental in this design is of a very cheap character, while it is calculated to produce much effect. You will perceive that this cottage requires a peculiarly shaped situation, although almost any site may be made to answer by a little labor in grading about the building. Were I to build of wood, I would enclose it with boards tongued and grooved, and put on vertically, and painted a stone color. Brick or stone, however, is preferable. On the one side, which we will suppose is the north, I have placed no windows, (except two small ones in the basement,) which will give it a naked and repulsive appearance; this may be obviated by a little trouble in training one of our creeping vines over it, and add much indeed to the appearance of the cottage. The cost will be about $700. Yours,

T. M. NIVEN, Architect.

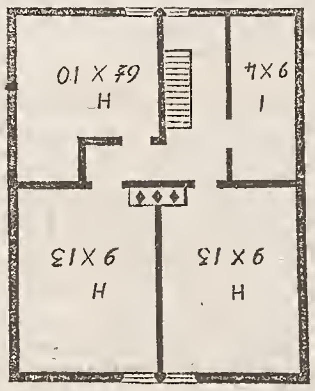
Newburgh, March 15, 1843.



Principal Floor.—Fig. 65.
A. Parlor—B. Sitting or Sleeping Room—C. Lobby.



Basement.—Fig. 66
D. Kitchen—E. Cellar—F. Store Room—G. G. Closets.



Chamber Floor.—Fig. 67.
H. H. H. Bed Rooms—I. Clothes Press.

IMPROVEMENT OF SANDY LAND.

MESSRS. GAYLORD & TUCKER—The following account of an experiment with muck, is not sent because the crops are of themselves extraordinary, but as one more confirmation of its oft repeated value.

Upon two acres of pine plain land, that has produced from 15 to 20 bushels of corn per acre, (say 15 average crop,) as usually managed, was carted in the fall of 1841, about 50 loads of muck, taken immediately from a swamp near by, which I was ditching at the time. The muck was wet and the road steep; consequently not large loads could be drawn. It was laid in small heaps over the piece, and in the spring of 1842, after the frost was out of the ground, spread. About the same time, I carted upon the field stable manure, and mixed with one-third muck; also one hogshead of lime, (6 bushels,) slacked before using, in sufficient quantities for a compost heap of 25 loads. This compost, when partially fermented, was spread upon the ground and plowed in with a light plow. The ground was harrowed, planted with eight rowed white corn, and rolled with a common plank roller. The corn came up and looked finely until the heavy frost in June cut the tops even with the ground. However, it soon started and grew as before. It was hoed three times, using the cultivator between the rows. As soon as sufficiently ripened, the corn was cut and stooked; the ground plowed once and sowed to winter rye, one bushel to the acre, and harrowed in. The corn when harvested, yielded 70 bushels of ears, or 35 bushels of corn to the acre, and a fine quantity of corn fodder, which when cut and mealed, made excellent feed for my horses. On the 3d of May last, I sowed upon the ground 10 lbs. of southern clover and 8 quarts of fox tail seed to the acre, and harrowed lengthwise of the furrows. Not quite liking the looks of the field, it seeming not quite sufficiently *scratched,* I ordered it harrowed crosswise, in spite of many warnings that I should spoil the crop, being determined to know whether harrowing killed or cured. After harrowing, the ground was rolled and left until last week, when we reaped from it 32 shocks of rye, which will yield me 30 bushels—so say the reapers. The grass seed has come up, and bids fair to give a good crop of hay next season.

The question that comes up, is—"Can we afford to cultivate such lands with any extra expense or labor?" The same quantity of manure put upon the field, would not have returned me over 20 bushels of corn, and 10 of rye—30 bushels of grain in all. Now I have 35 of corn and 15 of rye—50 in all. What is the extra expense? 25 loads of muck. I can hire muck drawn for eight cents a load. If others will do it for that, I can do it for *less,* with my own man and team. Cost of muck, two dollars; add to that, if you please, the cost of the lime, three dollars: and the 20 bushels of grain has cost me five dollars. Take into the account the extra quantity of corn fodder and straw, with the certainty of a good crop of hay where nothing grew before on summer fallows and two years idleness, and the corn is nearly, or *quite,* clear gain. And have I not added to the capability of the soil? If this course of treatment add to the crop this time, will not a like course add still more next time?

Comparative value of land affords another test and answer to the question—"Can we afford it?" The best meadow lands in this vicinity, ranging in value from $60 to $125 the acre, do not yield an average crop of more than 40 bushels of corn to the acre. What they might yield, is not what we have to do with. If first rate lands yield no more, then the bare difference of interest money expended on light lands, costing $20 the acre, makes the poorer land equal in productiveness, with the very great advantage in these hard times of a small debt to pay, for those who buy on credit. There are hundreds of acres in Connecticut valley, of such light lands, and almost invariably a muck swamp or clay bed is near at hand, to be used for their renovation. So well satisfied am I with my success, that I have several acres more under a regular course of muck diet, differing perhaps in some degree from the first, but all apparently to be as successful. One piece, that yielded a crop of 6 bushels of rye to the acre last year, bears at present a fine looking piece of corn, that has stood the drouth much better than some better soils, although a part of it was blowing sand before planting.

The course that I have pursued, I do not recommend as the best one, but I have been obliged to adapt my course to my knowledge and locality. A liberal reading in the Cultivator, Dana's Manual, Liebig, &c. has had its effects already; yet as my swamp is but a few rods from the plain, and my stable yards a mile and a half, I cannot realize all the benefit that I should like. Time perhaps may remedy that. Yours, &c. A. PERRY PECK.

Sunderland, Franklin co., Mass., Aug. 3, 1843.

THE WEATHER AND THE CROPS,
ON STATEN ISLAND, JUNE AND JULY, 1843.

MESSRS. GAYLORD & TUCKER—After suffering from a severe winter and a cold protracted spring, agriculture in this region is languishing from the absence of rain. It is now more than a month since the earth was refreshed with sufficient moisture to wet the surface half an inch deep. Here where the soil is principally clayey, it is hard and dry, and baked into a crust, and that crust in some fields cracked into fissures. The crops of all kinds are consequently injured by the drouth, which extends east of us throughout Long Island and into Connecticut, and south and west of us into New Jersey.

Hay is the staple crop of this Island, and it bid fair to be a good one in the beginning of June; but it has since been checked in its growth by heat, and so dried up by a scorching sun and drying winds, that the crop of this year will be one-half less than that of 1842. In the early part of the month I thought it would be less by one-third, but by examination and inquiry among farmers, they generally admit that one-half the quantity compared with last year's crop, will be as much as they can possibly realize. This opinion has now been confirmed by some who have gathered and housed their crops of hay, while those who have done it in part, have come to the same conclusion. Mine will not be far from the same proportion. I have already gone over ground that produced *one hundred and twenty-five loads* last year, and have gathered therefrom *seventy-five.* I have yet to cut two lots of grass that produced *one hundred and eight loads* last year, and by estimate will produce *sixty.* At this rate, I shall have 135 loads this year against 233 last year, being a little more than half. My neighbor, Mr. S——y, who has heretofore cut between three and four hundred loads of hay, has gathered nearly all his crop, and he informs me that his fields will produce about half the quantity they did last year. Thus it is ascertained without guessing, and without a doubt, that this region of country, which produces much hay, will be short one-half of its last year's production.

Wheat.—The crop of wheat on this Island is generally good. The berry is plump and fair, and the straw is light. Mine is better than it has been for two years past, but the grass seed which was sown with it, though it came up and looked well in the early part of the season, has withered and dried up with drouth, and unless we have plenty of rain in a short time to revive the roots, the crop of grass for next year will be lost.

Rye.—The rye crop in the county of Richmond is not an extensive one, and the grain is mostly for domestic use. This year, the crop though small, is a good one, and the seed large and plump.

Barley and Oats are poor throughout the county, and less to appearance than half an average crop. After the seed was committed to the earth the latter part of April, there came heavy cold rains, followed by hot and dry weather, and the clayey soil became covered with such a hard crust that the young plants were a long time in penetrating it. Two months after sowing it, I had it in contemplation to plow and turn under both my barley and oats, but the hardness and dryness of the ground prevented it: and this day, (July 24th,) I commence reaping a poor crop of barley and oats, prematurely ripe, having been less than three months growing. These crops cannot be cradled, but must be cut with a grass scythe, and be housed in bulk. In the winter I shall run them through the cutting box, and feed the straw and grain together.

Corn.—The young plants were injured by a heavy frost on the 1st and 2d of June, and have subsequently felt the effects of hot and dry weather, but the crop generally has withstood the drouth better than other crops, and now bids fair to be a good one. But if the dryness continues it may still be poor.

Potatoes.—This crop will be a short one both early and late. The early planted were injured by frost, and then by heat; and those planted for a fall crop, were retarded in their growth by the drouth, and have begun to blossom before the plants have attained half their ordinary height.

Cabbages.—This island usually affords a large crop of cabbages by field culture, but the young plants which have been transplanted from the seed bed to the fields, are very much retarded in their growth for the want of moisture, and will produce a poor crop.

Garden Produce.—Vegetables of all kinds are injured, and some cut off by hot and dry weather. Peas, beans, carrots, parsneps, beets, melons, cucumbers and onions, are all up to this time, (July 24th,) languishing for rain.

This county, (Richmond,) surrounded by water with a wide bay and ocean on its south and easterly side, has usually a moist atmosphere, but there appears of late to be no humidity upon the land or in the air. During the driest of the weather we have not even had dew to refresh the parched earth. The ponds and the wells are drying up, and unless we soon have a copious supply of rain, cattle will also suffer from the effects of the drouth. The mowing grounds after harvest will afford no pasture, and man and beast will feel the want of rain more seriously than at present. But we are in the hands of the Almighty, to whom we must look and pray for a seasonable supply.

These memoranda are forwarded to the Editors of the Cultivator, as matters of reference hereafter. Few persons have any desire to read such facts about the weather, but they may be useful to a periodical journal as affording the means of future comparison.

The following is an abstract of the weather, beginning the first of June. The days not mentioned were generally clear, hot and dry, but sometimes cool morning and evening.

June 1st and 2d. A heavy frost, which injured the fields of Indian corn, beans, peas, and other garden vegetables.

June 3d. Cold shower with hail.

June 6th. Warm light showers.

June 11th. Light drizzling rainy day.

June 14th. Heavy rain and cool.

June 16th. Warm heavy showers, which revived the cornfields.

June 29th. Heavy squall of wind with light shower.

July 2d. Heavy squall of wind without rain, followed by a light rain at night.

July 5th. Light sprinkling of rain.

July 7th. Light sprinkling of rain.

July 10th. Threatening clouds, but no rain.

July 11th. Cloudy, with light rain. Ground parched, and crops suffering for want of moisture.

July 12th. Threatening clouds but no rain.

July 17th. Cloudy with light showers.

July 19th. Heavy refreshing shower, which continued nearly an hour.

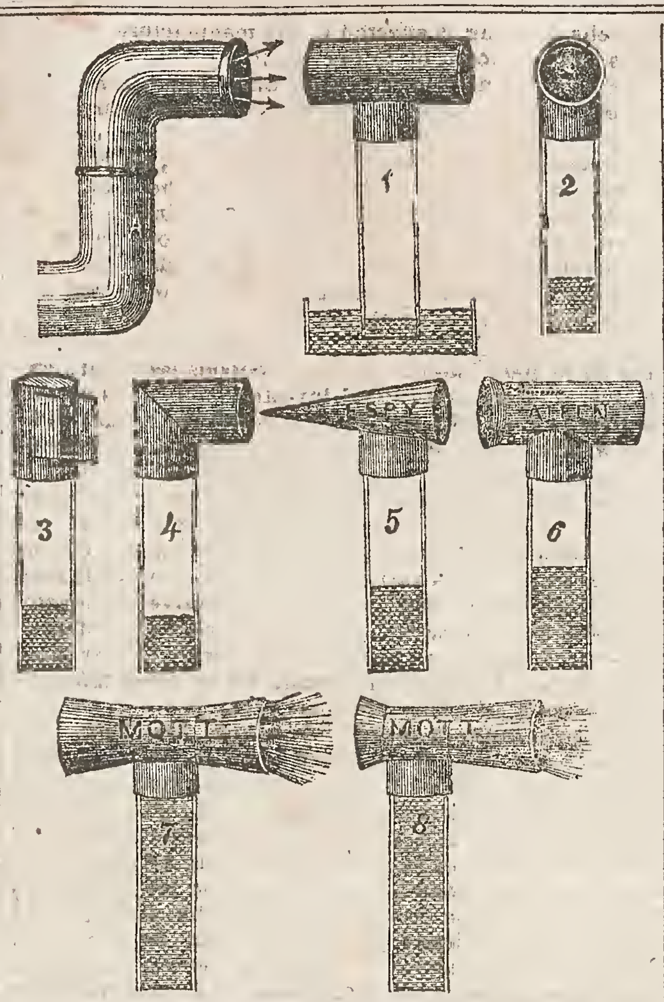
July 22d. Again hot and dry. The first perceptible effect of the rain of the 19th has disappeared, and the ground is again parched.

July 24th. Still hot and dry, and all nature in a languishing state.

From the 8th to the 18th of July, the drouth was somewhat mitigated by cloudy intervals threatening rain, but never were appearances more deceptive. It is said that all signs fail in a drouth, and so it has happened in these intervals, when myself, my neighbors, and every body who pretended to be weatherwise, predicted rain daily from the appearances of the clouds. But the clouds passed away and the rain came not, at least to this part of the island, (south side,) from which I write. The clouds might have dropped rain on other parts, but they mostly blew over in squalls, or left a light impression behind, as on the 2d, 5th and 7th July. Yet these clouds poured down rain, as we could see, upon the ocean to the east of us, and upon the hills of Monmouth co. in New Jersey, to the south of us. From your friend, and the friend of agriculture. RICHMOND.

Oakland Farm, Staten Island, July 24th, 1843.

THE Autumnal exhibition of the Pennsylvania Horticultural Society, will be held on the 20th, 21st and 22d of September.



CHIMNEY CAPS AND VENTILATORS.—(Fig. 68.)

MESSRS. GAYLORD & TUCKER—To test the real value of the various Chimney Caps and Ventilators in use, I have made, during the past twelve months, many experiments, in most of which I have been assisted by Thomas Ewbank, Esq. of this city. Many caps were sent to me for trial by others. The experiments were witnessed by members of the American and Mechanic's Institutes, and several other scientific gentlemen, who were much interested, and expressed their surprise at the results.

Trials were made in the following manner:—A glass tube of 1 inch bore and 18 inches long, was provided; on the top of this tube the various caps were placed; the lower end of the tube was immersed in a vessel of water, the upper end with the cap, each in turn, was placed in the blast produced by a blowing apparatus driven by a six horse steam engine, used for melting iron in my foundry at Morrisania. The blast was through a six inch pipe contracted to three inches, the caps being placed about 12 inches from the pipe, so that the wind could have free action on the outside as well as inside of those caps that were hollow.

More than one hundred caps were tried, consisting of the various kinds in use in this country and in Europe. The experiments were repeated several times with the same results. The mode of experimenting is here illustrated. *A.* represents the blowing pipe.

The results with the better kinds in use, were as follows: (the dark part of the tube showing the height the water was raised:)

No. 1, is a common T, with the cross pipe of a continuous diameter. When the blast was directly through the cross pipe, it had a tendency to depress the water in the glass tube.

No. 2, is the same cap turned at a right angle to the wind, when the water rose from 1½ to 2 inches.

Note.—These two experiments will explain why, in some instances, the brick arch or hood on the top of a chimney will in some cases prevent smoking, and in others entirely fail. If the adverse wind blow against the open end, the chimney will smoke worse than if without a cap; if it blow against the side of the arch, the smoking will probably be obviated.

No. 3, is a well known and common cap. With this the water rose from 2 to 2½ inches.

No. 4, is a common elbow, with the blind side to the blast. The water rose from 1½ to 2 inches.

No. 5, is the conical ventilator, with the point to the wind. The water rose 3½ inches. This cap was tried with the side forming a right angle with the blast: in that position the water rose 5 inches.

No. 6, is a cap much used and highly prized in Boston and other places in the eastern states. It has a small tube in the end next the blast opening in the large cross cap, as shown by the cut. With this the water was raised 4½ inches, which was higher than any other (except with the cone, when placed with its side to the wind,) previous to the trials with 7 and 8.

No. 7, it will be seen is two conical frustrums, joined at their smaller ends to a center cross pipe. With this cap, either end to the wind, the water rose to the full length of the glass tube, 18 inches, and was blown out the opposite end. Trial was made again and again with this cap, at a right and other angles to the blast, and in every instance the water was raised from 7 inches upwards. A board was placed behind, on the side, and in every mode, to break or deflect the blast, yet the water rose in the tube. This is a very simple cap, easy of construction, and not likely to get out of order, as it differs from most others in being stationary.

No. 8, is a single conical frustrum, with the smaller end to the wind: the effect was the same as in No. 7. With the open end to the blast, the water was raised the length of the tube, and blown out the opposite end.

Having the apparatus by which the above experiments were made ready for use, I will cheerfully loan it; furnish the size of the ferule, and grant any facility to any person who may have a cap that he thinks will answer the purpose of a ventilator. JORDAN L. MOTT,

New-York, Aug. 1843. 264 and 266 Water st.

THE SILK BUSINESS.

MESSRS. GAYLORD & TUCKER—It is scarcely admissible of a doubt, that the United States will yet be largely engaged in the manufacture of silk. The best varieties of the mulberry will flourish well throughout a large extent of our territory, and the worm is every where easily reared. Land of the best quality may be had cheap, in locations where the climate is most farvorable to the worm and the tree. But there have been, and still are, some obstacles in the way of a successful prosecution of this business. These obstacles may be chiefly enumerated as follows:

1. Having derived our silk fabrics from foreign countries, we are at present unacquainted with the manufacture, and cannot engage in it without the risk and liability to loss, which always attends an undertaking that has not the light and benefit of experience to guide its operations. Partial failures and losses, are frequently, if not generally sustained, in the commencement of a business in which the operator has no experience, even where the most perfect success is ultimately attained. The losses and failures attending the outset of a business, are therefore no evidence against its final success and profitableness.

2. The labor required both in feeding the worm and in the manufacture of the silk, is very much cheaper in those countries which have heretofore supplied us with silk goods, than it is here; and this cheapness of labor, added to the comparatively low rate of interest on capital in those countries, allows the foreign article to be brought into our markets and sold at so low prices, that our people dare not incur the risk of starting the business here, without some additional guaranty against loss in the beginning.

These, I believe, constitute the principal objections to the silk business in this country. Now, how can they be removed? or would the business be of sufficient benefit to this country to justify an effort to remove those objections, and establish the manufacture among us? I think it can hardly be doubted by any one, that the successful establishment of the silk manufacture in this country, would be a national benefit. Our annual purchases of this description of goods, averaging some twenty millions of dollars, are of necessity paid for chiefly in specie, because the foreigner wants few or none of the products of our soil and labor, and if we buy of him we must pay the *cash*. By manufacturing these goods here, we save the money at home, and distribute it among our laborers—adding to their comfort, and aiding them and our country to true independence.

Let us then consider the objections and their removal. The absolute certainty that this branch of industry, in all its departments, is perfectly practicable here, and the certainty, also, that if once established it would be beneficial to the country, are, it seems to me, reasons sufficiently strong to justify the government in extending to it a special protection—such protection or encouragement as would furnish inducement to undertake the business, and afford some guaranty against the liability to loss attendant on an untried enterprise. Excepting in the outset of the business, while its various processes are not understood, and the best mode of management has not been discovered, it is confidently believed that no extra protection will be needed. It is thought by those who have had the most experience in the silk manufacture here, that if we can once make a fair beginning, and be indemnified against lost, we shall, by the use of improved machinery, and by adopting better and more simple modes of manufacture, be fully able to produce silk fabrics as cheaply as they can be produced in any part of the world. I will offer some practical proof of the soundness of this idea. It is well known that in the cotton manufacture we have made such improvements in machinery, that we are now able to supply some articles at a lower price in the foreign markets, than the English manufacturer can sell them. Low as the foreign operatives are forced to work, the manufacturer cannot bring his animal machinery into successful competition with the machinery invented by our ingenious mechanics. But without a protection in the *beginning*, the cotton manufacture could not have been established in our country, and this improved machinery, which has so much cheapened the price of cotton fabrics, would never have been invented. It is believed that the same results will follow the establishment of the silk manufacture, that have attended that of cotton. In countries densely populated, where the laborer is anxiously seeking employment for a mere pittance—(a *subsistence*, in many cases it can hardly be called,)—there is no inducement to substitute machinery for manual labor. In fact, if such an attempt was made, it would, by depriving the poor laborers of the only means they now have of procuring sufficient sustenance to support life, occasion revolutionary violence,—and the probability is that the machinery, if not the owners, would be quickly demolished. It is, therefore, to be expected that in those countries where labor is cheapest and population most numerous, implements and machines will be least used, and the few that are used will be of the most rude construction. Here we have every inducement for the invention of labor-saving machinery, and our vast extent of unoccupied territory, and our almost unlimited capacities for obtaining the means of subsistence, will continue this inducement for ages yet to come.

The inventive genius of our people has shown itself in every branch of business in which they have ever engaged. As soon as any kind of business is understood, so that they can see what is required, improvement in the process, and the substitution of machinery for hand labor, is sure to commence, and go on till it reaches the ultimatum of perfection.

I have lately visited the silk establishment of Mr. Jno. W. Gill of Mount Pleasant, Jefferson county, in this state, and having obtained from him and his superintendent, Mr. Fox, some facts which may be useful to the public, I herewith offer them to you for publication.

Mr. Gill commenced the silk manufacture in 1838, though for the first two years his operations were not on a very extended scale. He has since that time been constantly enlarging his business and improving the quality of his fabrics; while at the same time great improvements have been, and still continue to be made, in the construction of machinery. As fast as a knowledge of the business is acquired, improvement in the machinery, by which a saving of labor is effected, as well as the manufacture rendered more complete, commences and progresses.

I present a brief summary of the improvements which Mr. Gill has adopted. The items were furnished principally by Mr. Fox.

By the use of what Mr. G. calls his "*Improved Feeding Tent*," there is a saving in building of 75 per cent. This "tent" is very cheap and simple, and answers the purpose admirably. It is made by setting up in the ground three ranges of posts, of suitable length to give sufficient height, (common cheap scantling do well enough,) and making a *shed* roof, by laying on boards or plank, and fastening them with weight poles. The sides are rough boarded to within five or six feet of the ground. Strips of canvass, or any cheap cloth, so fastened as to admit of their being raised up or let down at pleasure, constitute the remainder of the covering. The hot sun is thus excluded, and air readily admitted by throwing up the canvass on the shady side. Range the tent north and south, and in the forenoon leave the west side open, and in the afternoon the east side.

2. By the use of an improved apparatus for feeding, called the "*Silk Worm Ventilating Cradle*," a saving is made in the labor of feeding, cleaning, &c. of at least 50 per cent. This "cradle" is a very novel but simple and cheap apparatus, for which Mr. G. has obtained a patent. It will undoubtedly take the place of all other modes of feeding silk worms. The cradles are twelve feet long, a foot and a half wide at bottom, and five feet wide at top. At the bottom is a trough, which is set in three large rockers. To this trough is fastened one end of the lath, which constitute the sides of the cradle. Over the top of the trough, is placed a rack to support the worms. Straw, or small twigs of the mulberry, properly placed, may take the place of the rack. This may be said to constitute the bottom of the cradle, and here the worms are placed when they have attained sufficient size to begin to feed with branches. They are not again changed—as they increase in size and are brought upward by the accumulation of branches, the gradually increasing width of the cradles affords them ample room—the cradles being so graduated that the same number of worms which will cover the bottom when they are young, will just fill them when they are full grown. By rocking the cradles, the excrement of the worms, and all filth, falls into the trough and is washed out by turning in water at the end. The rocking also effectually changes the air about the worms, and effects a healthy circulation—hence title of "*ventilating cradle*." Mr. Gill assures me that he has in no instance lost on this plan, five per cent of the worms, from the time they were placed in the cradles till the cocoons were made. In fact, he offers to let any one have his patent for one-half the extra quantity of cocoons that can be made on this plan, over the quantity which can be produced from the same number of worms fed on any other plan. The worms spin their cocoons among the upper branches, which are perfectly clean and afford every facility for spinning. Each cradle of dimensions given, will accommodate about 10,000 worms. Their cost is about $2 a piece.

3. "By using," says Mr. Fox, "the principle of Dr. White's throwing machine for the first twist, in our new machine of 150 spindles, we save over 25 per cent in the preparation of the thrown article." This most valuable machine, which Mr. Fox, who was bred to the silk manufacture in Europe, thinks is superior to any thing of the kind in the world, performs five operations at once, viz: reeling, winding, twisting, doubling, and finishing for sewings or organzine. Mr. Fox states that "a female of 14 to 16 years of age, can keep in constant operation one of these machines of 150 spindles, and twist silk varying in quality, from 4 to 16 fibres, from 16 to 40 lbs. per week. (It is proper to remark that this machine has been brought to its present high perfection, in a great measure, by the ingenious labors of Mr. Ezekiel Harris of Mount Pleasant.)

4. Mr. Gill has an "improved *Rejinear* for cutting and repeating cards to any pattern, for the French Jacquard looms—for machines varying from 100 to 1200 cards, and performing *six operations over the European kind*."

5. Mr. Gill has also an "improved mode of putting flowers on silk goods without the use of a tissue shuttle, whereby a saving is effected in the manufacture of brocades to the amount of 25 per cent."

Mr. Gill has now in operation nine looms, viz:—one velvet loom, one satin do., one nett do., one figured do., one plain dress silk do., one handkerchief do., one for Florentine and Mantua, and two for gloves, under shirts, drawers, and stockings. He employs in the factory 20 hands, besides one engineer and two machinists. In addition to these, he has 12 females in various families, employed in spinning *silk tow* from the damaged and "cut out" cocoons. In the mulberry grounds and cocooneries, there are employed from 6 to 10 hands. He raised last year 76 bushels cocoons—expects to raise this year 96 to 100 bushels. Cost of cocoons last year, exclusive of interest on capital invested in 30 acres of land devoted to the mulberry, &c. $2 40-100 per bushel. The cost will this year be considerably less, as he is enabled by the more general use of his improved modes of feeding, to make many more cocoons with the same labor. Mr. G. has heretofore fed chiefly with the Italian and Multicaulis mulberry, but is intending to try the Canton another year. This variety is considerably used at Economy, Pa., where there is quite an extensive manufactory of silk fabrics, under the general supervision of Miss Gertrude Rapp. I visited this establisment two or three years since. I believe they made six or seven thousand dollars worth of goods there last year.

In regard to the best food for worms, Mr. Fox, who has had much experience in the business, and is a man of remarkably close observation, advises to use the Italian mulberry for the first and last stages. If there is not sufficient foliage of this variety to furnish the *entire* food of the worms, about half Multicaulis may be safely used with the Italian, *from the second moulting till a week before spinning*. Use no Multicaulis for the first and last stages, if a sufficiency of the other can be had. Mr. Fox's recommendation is seconded by several others who have fed with the Multicaulis and other varieties of mulberry.

Mr. Gill made and sold last year, between nine and ten thousand dollars worth of silk goods. This year he hopes to manufacture twelve or fourteen thousand dollars worth. Upon the whole, he has been very fortunate in the prosecution of this enterprise. But he has had some advantages which are within the reach of only a few. He has an ample capital, which has enabled him to manage to the best advantage in the purchase of stock, payment of labor, &c.; to provide at once the best machinery, and to wait without inconvenience, till he could so far establish the business that profits would be realized; and lastly, his *good fortune* has been more conspicuous than perhaps in any thing else, in securing the services of the two Messrs. Fox, senior and junior. The thorough acquaintance of these men with the silk manufacture, their knowledge of machinery, and tact in business management, have been of very great benefit. In all these things, however, Mr. Gill has had advantages for successfully engaging in the silk business, which but few can have, and hence it is, as was remarked in the former part of this article, that without some special encouragement from the government of either the states or nation, the people will be debarred from entering into the business, from their general inability to incur the risk incident to commencing the experiment.

Mr. Gill pays his operatives good wages. Girls of 8 to 10 years of age get a dollar a week, and those of 14 to 16 get a dollar and fifty, to a dollar and sixty-two cents per week, they boarding themselves. Their work is light, and they make short days; working only ten hours at any season of the year. This gives considerable time to be devoted to other labor, or to books. So that judging from this example, we need have no fears that the introduction of the silk manufacture will be injurious to the body or debasing to the mind.

I send you herewith, a small sample of one of the colors of the silk ordered by the government from Mr. Gill, for the purpose of making a flag for our Chinese Embassy. The flag contains 152 feet crimson, (like the sample sent,) 15 inches wide; 126 feet white, same width, and 2¾ yards mazarine blue, 45 inches wide, for stars.

I consider it not only a high honor to Mr. Gill, to be the manufacturer of the first silk fabric ever sent from this country to China, but it is an honor also to our *Buckeye state*, that he is one of its citizens! The quality of the fabric, you will perceive, is such as will show the *Celestials* that the *barbarians* of our new country are at least *beginning* to practice the arts of *civilization*.

SANFORD HOWARD.

Zanesville, Ohio, Aug. 3, 1843.

SCRAPS AND PATCHES.

MESSRS. GAYLORD & TUCKER—I was highly gratified to see in the July Cultivator, a notice of an "Agricultural Institute," which was under contemplation by the Rev. B. G. NOBLE of Bridgeport, Conn. I sincerely hope that Mr. Noble will meet with such success that he will be able to go forward at once with this noble enterprise. I have for some time past thought of the great importance of such a school, and I should be very glad myself, did circumstances permit, to attend such a school for one or two years. And I would recommend to our young men who mean to take up agriculture for their future business, and should their means allow, to avail themselves of this "Institute," and there learn the great business of farming, and also the other branches of a good education.

Under the head of "Foreign Intelligence," you say that you have been often tempted to commence a Foreign Journal of Agriculture, which should embrace all the most important papers of the foreign magazines. I think, as you do, that such a magazine, if well conducted, would meet with succees. The high price which foreign agricultural journals come at in this country, place them out of the reach of the great mass of our farmers. But could a republication of the cream of these journals commence in this country, we think it could be afforded at half the original price. For instance, Blackwood's Magazine is republished in the form of the New World, and is afforded at $2,00 a year, whereas the original publication costs five or six dollars a year. The mass of reading which these journals contain, would afford a rich treat to our farmers, and I hope that you will continue to think of this subject, and lay it before your readers, as I have no doubt but that you would meet with such success as would enable you to commence it at some future day.

I was sorry to notice in the June Cultivator, the death of James M. Garnett. In his loss, the cause of agriculture in particular, has lost a great friend and advocate. And the readers of the Cultivator too, will miss his papers, and particularly those signed "Commentator," which have been so ably written. Since the death of Judge Garnett, I have thought that some one of your numerous correspondents, who has had age and experience in every branch of agriculture, should step into "Commentator's" shoes, and act as a reviewer of the articles in the Cultivator, from month to month. I hope that some one will think of this matter, and act accordingly.

What has become of your correspondent, L. A. Morrell, the sheep breeder? I have not had the pleasure of seeing his name in the present volume of the Cultivator.

Yours truly, L. DURAND.

Derby, Conn., July 31, 1843.

CRUSHING CORN—CORNSTALKS.

MESSRS. GAYLORD & TUCKER—I do not intend passing another winter without a corn and cob crusher. During the winter of 1840-41, I hauled my corn to a bark mill, run it through, and then hauled it ten miles to a grist mill, and got it ground coarse, and never but in one instance did I get my grist without going twice for it. This you will say was paying dear for the whistle, and so it was; but I thought it paying dearer still, to see my working cattle voiding unmasticated, full one-half the corn they ate.

In 1841-2, I hauled my corn to a steam mill in town, and paid one-sixth for toll, besides paying $5 to get the thing started; and I foddered 26 head of cattle and young horses on cornstalks, cut up at the roots before frost, on to which, after being run through a patent cutting box and well wet, was put from two to four quarts per day to each head, of corn and cob meal. My cows gave milk all winter, and nearly up to calving; and all my neat stock, with one or two exceptions, would, if any accident had happened to them, have been ready for the butcher.

I saved $400 in wintering my stock, admitting hay to be worth $14 per ton, which was the case here that winter. I have a portable horse power which I think will turn the crusher, and stormy days in winter, my help can be employed in grinding, instead of keeping under the feet of the women, who must necessarily be employed about the house. Yours, truly, J. W. SMITH.

Maumee City, O., 1843.

P. S. Will the gentleman of "Hereford Hall," please favor me and the public, through your paper, with the particulars respecting his mode of raising calves, and especially the manner of making flax seed jelly, from the beginning until it is ready to feed. Will ground oil cake do as well? J. W. S.

BREAKING HEIFERS.

MESSRS. EDITORS—When I sent my last article to the Cultivator, I intended to let my pen rest awhile: but noticing an article in your last no. on the subject of "Breaking Heifers, &c." it occurred to me that my experience might aid a little on that point. Your correspondent is correct in saying that a "deep milker may be of little value to the dairy, if inclined to kick over the pail as soon as you get it full." Some two or three years since, I had a thorough trial with a kicking heifer; it was not only a *thorough* but a *sore* one, as some of the blows inflicted on my person, caused pain for near two months. Various means were resorted to to break or coax her to good behavior, but none proved effectual. Being determined not to yield to the slavery of tying a cow at every milking, she was given up as a hopeless case. Having a number of valuable heifers, and recollecting the remark that "an ounce of prevention is worth a pound of cure," I began at an early day, a course of gentle handling and imitation milking; hoping that when they should come in, the breaking process would be accomplished. And this I found to be the case—my hopes were fully realized. Perhaps the like result might not follow in every instance; but there can be no reason to doubt that in nine cases out of ten, the above course would prove successful. One of my neighbors intimates to me, that in giving you an account of what I considered the remarkable growth of a pear tree in a single year, that I was understood to say the tree grew 30 feet perpendicular! That would be a wonder, truly! The fact, as intended to be expressed, was that the aggregate of all the branches amounted to that. Respectfully yours,

Clinton, N. Y., July, 1843. G. BUTLER.

ON THE MANAGEMENT OF DAIRY COWS AND CHEESE DAIRIES.

BY ALONZO L. FISH OF HERKIMER CO., N. Y.

(Concluded from page 131.)

It is difficult to give a regular system of directions for manufacturing cheese, which will apply to every one's circumstances, as there are many minute items which have their chemical agency in the process, whose concert of action is varied by many incidental causes. The nature and condition of the cows, the quality and treatment of the soil, the varieties of food from which the milk is formed, and the temperature of the weather, may vary the common properties of the milk so that it would be impossible to adopt a method which would make the same quality of cheese from the milk of every dairy, or even from the same dairy.

Yet I think a regular systematic course of feeding cows summer and winter, so as to keep them vigorous and not easily affected by the asperities of weather, keeping them cool in warm weather and warm in cold weather, and milking at regular equal hours, and feeding with a view to keep up an uniform flow of milk, will do much towards keeping an equilibrium in the common properties of the milk, and thus prepare it for a systematic process of digestion, which would save the dairywoman much unjust censure. To have this arrangement more complete, the room for making cheese should be an under ground room, with stone walls and floor, which should be pointed with water lime, and so constructed as to control the temperature in cool weather during spring and fall, also through the heat of summer.

The rennet, if properly saved, generally contains the same common qualities, and will always produce a like effect upon the common properties of the milk, if aided alike by its principal chemical agent, which is *heat*. It is therefore necessary to first bring the whole quantity of milk to an equal temperature. It is a common practice to put a part of the evening's milk into a vessel and warm it sufficient to produce the necessary equilibrium of heat when mixed with the balance of milk. In this process the milk is often heated from 100 to 120 degrees, which is a great error and a serious one, as this is the first step that is generally taken in making cheese. The heat of milk and curd should never be raised above 96 or 98 degrees for making cheese. It is well known that overscalding curtails the usual quantity of curd. This is occasioned by a separation of the oily or animal properties of the milk by excess of heat, and always takes place when heated above the natural temperature of the stomach and milk, which is about 96 or 98 degrees.

Heat is an active chemical agent in consolidating the constituent parts of bodies, but it is also still *more active* in decomposing them when used to excess. If there is danger of a certain degree of heat overcoming the equilibrium of chemical attractions, after the more solid properties of the milk are collected into curd, (which I admit,) there is a greater danger of the same degree of heat overcoming those attractions in heating the milk, when those solid properties are floating at a greater distance from each other, and cannot have the same cohesive aid to guard against it.

A very slight observation in an experiment of this kind, will satisfy the querist of the truth of this position. It is therefore necessary that the whole quantity of milk should be carefully and equally warmed, by stirring it continually, so that no part of it shall come in contact with too much heat, which would separate the light oily parts of the milk from the common mass. This quality of the milk (which is the fat of the cheese,) cannot be united with the common mass after being separated by heat. It will then be found in the cream of the whey. If more of this article is left *in* the cheese, less will be required upon the *surface*.

When the milk is thoroughly warmed to 90 degrees, and placed in a tub or vat, a sufficient quantity of rennet should be thoroughly mixed with it, to coagulate in 40 minutes. A large quantity of rennet should not be soaked at once, as it will be difficult to keep it pure.

If in warming the milk, the proper temperature has not been attained, it may be regulated by a few gallons of warm or cold water, as the case may require. When warm water or whey are used about the milk or curd, over 96 degrees, it should be immediately equalized through the whole mass, so that those parts which come in contact with it first shall not be overheated. This *overheat* should be cautiously guarded against where there is the least chance for its effect. When the milk is coagulated so that the whey will settle clear, in a cavity made by putting in the finger or hand, it should be carefully broken up with the hand with as little rinsing as possible. One person to every 30 lbs. cheese, is necessary to be engaged in this process, in order that it may be performed in due time and in a careful manner. It should not be left after it is commenced, until it is worked down fine, and even so that the scalding process will operate equally upon the whole.

I am aware that *one* person will stir up a large curd, and make more motion in the tub than *several*, but I want no "duck playing" in my cheese tub, with milk or curd. The curd should be made fine with as little motion as possible, while there is sufficient heat for the coagulator to continue its effect. In the process of breaking up curd, there are numerous small particles that get disengaged from the common mass and float about in the whey. But if the mass is kept at its proper heat, and they are not rinsed off in the whey, they will again cohere. It is necessary that the curd should be made fine, so that it will cook equally in scalding with a moderate heat, which should not be allowed to fall below 86 or 88 degrees during the process of breaking up. After working it 30 minutes, the heat may be gradually increased while working it by adding whey; cautiously observing the degree of heat, and mixing equally as above directed, until it is of an uniform heat of 96 degrees, and keep it at this heat for 30 minutes, during which time a perfect equilibrium of heat should be kept through the whole by stirring it moderately and keeping it from cohering into a mass; it will then be thoroughly cooked and not scorched. Whey should be drained off, and one pound of Salina salt added to 50 lbs. of curd; mix it thoroughly and put it in press; in four hours change the cloth and press 12 hours; change cloth again and press 12 hours, which will be sufficient. The press hoops and cloths should be kept sweet by scalding; weak lye may be used with good effect in cleaning them; strict care should be taken to keep the pails, tubs, &c. perfectly sweet, as it is impossible to make good cheese from milk that is changed. It should be the first object of the dairy woman to preserve the milk perfectly sweet until the curd goes into the hoop; even then, if the cloths, press, hoops, &c. are rancid, it will effect the flavor of the cheese, and cause a rough rind, &c.

After pressing sufficiently, the cheese should be taken out, and stand upon a table two hours, to dry the rind and receive a coat of grease, which should be applied hot, to penetrate it and make the coat impervious to flies and air. The cheese should then be daily turned and rubbed, and occasionally oiled with whey butter. This is the best oil to use, as it is a constituent part of the cheese, and will not become so rancid as lard or other animal oils.

Cheese shelves should be kept free from any thing rancid, and the room should be kept thoroughly cleansed from rancid air, and of a temperature not to exceed 70 degrees; as an excess of heat would make smart rancid cheese. A fine firm quality of cambric should be used for bandaging cheese; it will immediately form a coat impervious to air and flies, (if thoroughly oiled,) and preserve the rind clean and tender, and cause less waste in the rind.

If the curd is not broken equally fine, in scalding, some particles will be cooked too hard, while the coarser grains will not be cooked through, and in breaking them will be found to contain fluid which cannot be pressed out, and will remain to ferment and make rancid bad cheese. In short, curd must be worked fine and evenly, and thoroughly cooked, to make good cheese: which may be done by making it fine enough and scalding it long enough at 96 degrees, which will not overheat.

If a cheese is desired very mild and destitute of smartness, this quality may be lessened by taking the animal heat out of the milk before it is manufactured, and by cooling the curd before salting. But cheese thus made will not cement together so solid in pressing, and will require more care to preserve them, and a longer time to cure. The variation necessary to be made in the shape, consistency and flavor of cheese, to fit them for different tastes, change of climate, and safe transportation to foreign markets, may be made by the skillful use of salt, which is the grand regulator and preserver after it is pressed. I therefore advise that cheese be well salted, as a general rule; for there is more loss to the consumer in one cheese lacking in salt, than in ten that are salted rather too much. Cheese that lack salt will be soft and elastic, and its properties will be easily dissolved when exposed to a high temperature, for want of a sufficient body, and will be found to leak out the richest part of the cheese in a sort of oil, after they are cured: consequently a bad unsafe article to export to distant markets.

But cheese that has plenty of salt and is well manufactured, will have a firm body and smart taste, and bear exposure in a high temperature without leaking out their best substance, and may be safely exported.

I will now submit the result of my operations with 20 cows the present season, according to the directions hereinabove given, commencing on the 19th day of April, with 16 cow's milk. On the 19th of April we commenced making cheese with the milk of 16 cows; on the 10th of May the milk of three more was added, and on the 10th of June the twentieth cow was added.

As feeding whey to cows, which is usually fed to swine, shifts a small profit, as I have practiced, I will allow the value of 25 lbs. of marketable pork, which is as much as is usually realized from the whey of a single cow in one season. I also charge all roots and grain feed used, at their fair market value, together with 400 lbs. of cheese per cow for the season, which is as much as the same cow would make upon the same hay and grass only.

500 lbs. pork, say at	4c.	$20.00
8,400 " cheese, at	6¼	$520.00
60 bush. mangel wurzel,	1s.	7.50
67 " potatoes,	18c.	11.46
15 " corn,	4s.	7.50
10 " barley,	40c.	4.00
80 " wheat bran,	11c.	8.80
		$759.26
Whole amount of cheese made to date, commencing on the 19th of April, as stated above, 11,300 lbs. at 6½c......		$734.50
Allow for extra quality, half cent,.....		56.50
		$791.00

Making a balance of $211.74, in favor of the above mode of treatment, and leaving the cows in full flesh and vigor, to protract the fluency of the milk till late in the season A. L. Fish.

"This may certify that I have manufactured the milk of A. L. Fish's dairy into cheese the present season, and have carefully weighed the whole amount up to this date, and find it to be 11,603 lbs. of present weight, (except 1,281 lbs. weighed at market,) also 96 lbs. of butter, which was made previous to April 19th, at which time cheese making commenced. Witness my hand, Oct. 20, 1842. William C. Young."

By request I extend a report in full of the management of my dairy since the Fair, till the close of the milk season, which is about the first of January, in connection with the above report, and the result is as follows, viz: On the decline of grass my cows were fed once a day for 20 days, with green corn sown broadcast, as a matter of experiment, which succeeded even beyond my anticipations; also three-fourths of an acre of beet tops. On the approach of cold frosty nights and through cold storms they were kept stabled, and kept dry and clean. As soon as grass had lost its nutrition by frequent freezing, they were fed plenty of hay after feeding the corn and beet leaves; they were fed regular at morning, each cow with a pail full of slop before feeding hay, which would afford them sufficient drink till midday. At 10 o'clock, A. M. they were turned out to get water, and exercise, to remain four hours, if the weather was mild; if not, put back again in the stable immediately after getting drink, and fed with hay; after eating hay, were fed with a peck of roots each, at evening, which tends to equalize the moisture in the stomach, with the dry hay. The slop was made by putting three quarts of barley meal, or four quarts of oat meal for each cow, into a large tub or vat, and add hot water enough to make a pail full for each cow, with the whey of the cheese being added, and covered tight to prevent an escape of the gas in fermentation, and thus remain 24 hours before feeding. This is fed in the morning, before feeding hay, to equalize the moisture in the stomach, and also disposes the cows to give down their milk freely, which is very necessary at this season of the year.

The whole amount of roots and grain fed to cows during the operation, is as follows:

Amount fed in Spring		
67 bush. potatoes, at 18c.		$11.46
60 " mangel wurzel, at 1s.		7.50
15 " corn meal, at 4s.................		7.50
10 " barley, at 40c..................		4.00
80 " wheat bran, at 11c...............		8.80
Amount fed since Sept. 1st.		
29 " barley, at 3s.....................		10.88
81 " of oats, at 18c................ ...		14.58
400 " mangel wurzel, at 6d.		24.00
Sown corn and beet tops, ...		15.00
		$103.72
I also charge the cows with 30 lbs. of pork each, which would have been made by feeding the whey to swine, 600 lbs. at $3 per hundred,.........................		18.00
I also charge them with 500 lbs. of cheese each, as a quantity they would have made from the same hay and grass only, at $5,50 per hundred, which is ten thousand,......		650.00
4 calves sold at 3 days old,...............		5.50
16 deacon skins at 2s. 6d. each,............		5.00
Whole amount of indebtedness for the season,		$782.22
Cows credit.		
By cheese delivered to S. Green, Nov. 17th,.	lbs	10,515
Am't of cheese weighed at home, Dec. 1st,.	"	2,670
" " made after and weighed when taken from the press,.....	"	811
96 lbs. of butter was made before the 19th of April, when cheese making commenced, and 205 lbs. made after cheese making, in all 301 lbs., equal to double the amount of cheese, ...	"	602
	"	14,598
I deduct 400 lbs. for use of the family cow, from June 20th till Nov. 1st.............	"	400
Whole amount of cheese from 20 cows,....	"	14,198
Credited at $7 per hundred which is the net price received for it,....................		$993.86
By 4 calves sold at 3 days old,.............		5.50
By 16 deacon skins at 2s. 6d...............		5.00
		$1,004.36
Cows indebtedness,......................		782.22
Thus showing a balance in favor of a systematic mode of treatment, of.............		$222.14

I charge the cheese at $6½ and credit it at $7, because the latter was the net price obtained, and because I think cheese made from cows under such a course of treatment, especially in the two first and two last months in the season, is worth to the consumer half a dollar per hundred more than that made from hay in spring, and fog and moonshine in the fall.

My cows are now in high flesh, in calf, and in proper condition to commence the milk season again the first of April next, without being fed any thing more than plenty of good hay, until they make milk again. The average age of my cows is nine years; color, red; native breed, some mixture of Holderness; their build low and heavy, with strong muscular system, and thought by most dairymen to be so even to a fault, with a strong development of vital apparatus.

This latter quality will be found by the enterprising dairyman to be an essential requisite; as the power in animals to prepare the greatest quantity of nourishment from a given amount of food, depends much upon the size of the lungs, the organs of digestion being subordinate to them. The cow must have room enough in the girth for a predominance of vital apparatus, for the lungs and heart to play, or sufficient nourishment will not be furnished for a fluency of milk, and to supply the muscular system with strength to endure the frequent and extreme changes of weather in this climate without being subject to disease. A large sagging paunch or belly and small loin, with a comparative small and flat girth, is a disproportion in the shape of the cow, and indicates a general weakness in the constitution, providing her with a large store room for food and a lack of sufficient apparatus to digest it without a waste.

With these views, I have made the girth the first point to be considered in the purchase of a cow; the chest is capacious in proportion to the girth, and its cavity diminishes with the increase of its conical or flattened form. This may be simply demonstrated by flattening a ring or circle till its diameter is reduced to nothing, without diminishing its circumference; thus proving the girth of an animal no certain proof of its comparative size, without particular reference to its elliptical form. The chest of a cow should be conical, widening backward to the last rib, with broad heavy loins, heavy hind quarter, udder set well forward, teats of good length and well separated, with large milk veins, which indicate a strong vascular system; with a flat loose shoulder, neck if thick not deep, clean head and horns, with bones in the frame uniformly flat and wide, strong muscles not closely connected with the bone or skin, the skin good thickness and mellow, hair soft if not fine. These are the qualities which I have endeavored to find in cows that I have selected for my dairy, as best calculated to keep up a uniform fluency of milk early and late, and bear a drift without disease or excess of feed.

Breeding heifers with a view to improve the milking qualities of our dairy cows, is a matter of no small importance to the dairymen of this county. Frequent attempts have been made to improve our native breed of cows, by mixing them with high fed overgrown bulls of foreign blood. But to accomplish the desired object by such a practice, would be reversing the order of nature; as the fœtus of such sires requires more nourishment to perfect the form and constitution of the offspring, than our common dairy cows can furnish them.

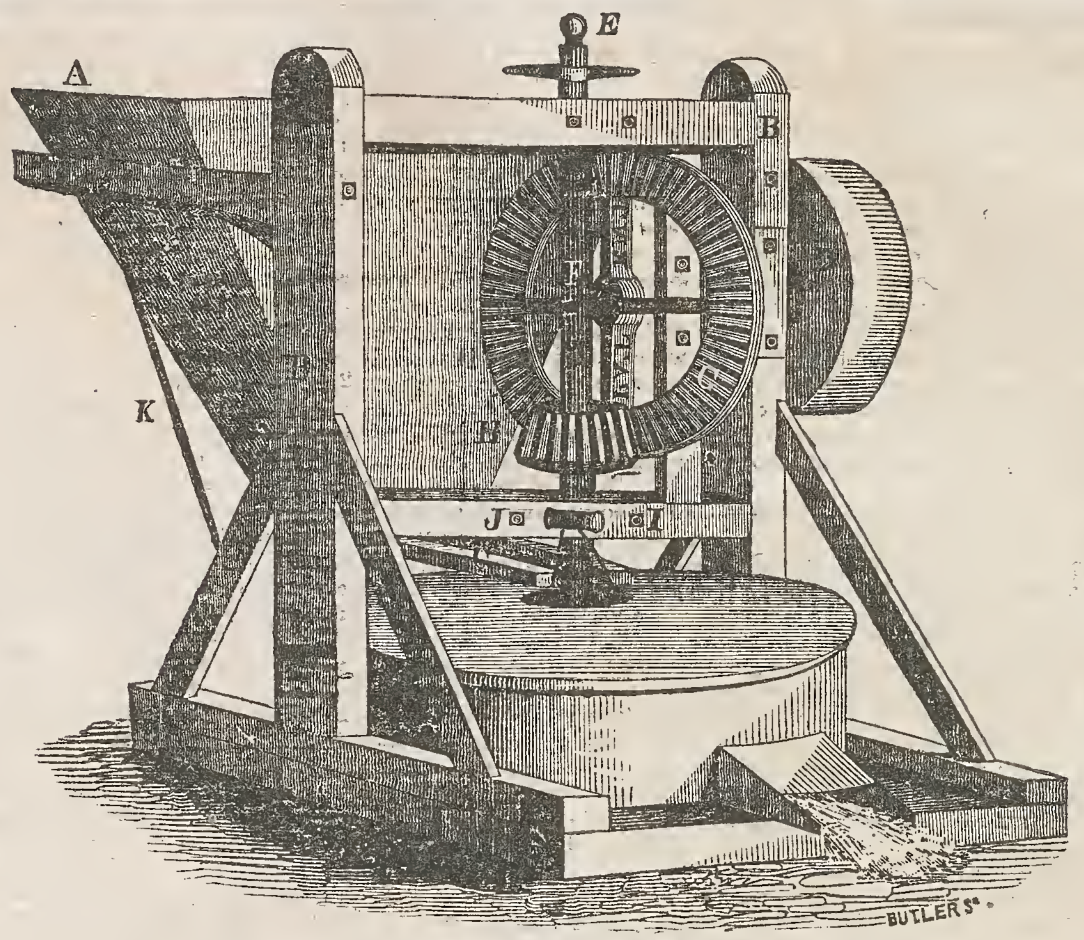
I will not go further into detail of this matter now, but will invite the attention of the enterprising dairymen and breeders, to the more thorough investigation of this branch of agriculture, in hopes that we may have more light shed upon the subject at our next annual Fair.

I submit these imperfect views for examination, not from the pen of a learned, but thinking farmer.

Litchfield, Oct. 19, 1842. A. L. FISH.

PLATT'S PREMIUM PORTABLE MILL,

For Grinding all kinds of Grain, Spices, Drugs, Paints, &c.



PLATT'S PREMIUM PORTABLE MILL.—(Fig. 69.)

MESSRS. GAYLORD & TUCKER—We take the liberty of sending you this communication, knowing that you take a warm interest in any really valuable improvement of machines or machinery calculated to benefit the agriculturist. We deem it too, an act of justice to the public, to make known any improvements of the kind which are of general interest.

The above machine accidentally came to our notice last winter, through the medium of a southern correspondent. We became apprised that Mr. Josiah Platt of Weston, Connecticut, was the patentee, and had exhibited the mill at the American Institute in this city, last autumn, and received the first premium; since which time it has been most successfully introduced into several of the states, and the demand for them promises to be almost unlimited.

We have, within a few days, had the pleasure of seeing this mill in operation: and we are convinced, as are all who see it, that it is a machine much needed by, and will be in general use among farmers and millers, wherever it is once introduced and known.

It is admirable for grinding Indian corn and horse feed. Grain of all kinds is ground with equal facility. Also coffee, and all kinds of spices; also salt, drugs, &c. and it is easily adapted for grinding paints. Its durability is equal to any other mill, the stone being composed of French Burr; and its efficiency with its simplicity is remarkable, as are also its other desirable commendations for compactness, portableness and low price.

There are four different sizes now made of these mills, viz: 12, 15, 18 and 24 inch stone; prices from $40 to $110. The smallest may be used by hand power and turned by a crank, and either of them are readily worked by horse, steam or light water power.

Wherever water power is scarce, and grist mills for grinding corn or grain of any kind are consequently scarce, these patent mills will be almost invaluable; for with one of these mills with horse power, any person could grind all that could be ground by any other mill.

It is at once admitted by all who have seen this mill perform, that it is truly a labor saving and economical machine; as with it more work can be done with less power (by about half,) than any other mill, and it will do the work at least as well and as fast, and the price is less than for any other.

Being so well satisfied of the superior excellence of these mills, we have accepted the general agency for the sale of them, and also for the patent rights in the patent for the state of New-York. We would therefore take this occasion to invite the attention of those who feel interested in valuable improvements to these mills.

Permit us also to say that "Warren's Improved Horse Power," for one, two or four horses, are now made and completely adapted to driving these mills. (See advertisement.) L. BOSTWICK & Co., 58 Water st.

New-York, Aug. 13, 1843.

BREEDING.

MESSRS. EDITORS OF THE CULTIVATOR—Taking up, a few days since, that usually inoffensive and harmless paper, the American Agriculturist, published by your amiable co-laborer, A. B. A., I saw with astonishment, (I cannot say with regret, for where an individual is so evidently overcharged with bile, the sooner he is relieved from his perilous burden the better,) a most furious onslaught upon an article on breeding, published in the Cultivator for July. I read that article at the time with no little interest, and, thanks, perhaps, to my having a thicker skull than A. B. A., without dreaming of the traps and spring guns it contained for the bloody murder, or to say the least, for the driving back to the place whence they came, our herds of beautiful Durhams, animals in which I have a special and particular interest. I read the really "fire-eater" article of A. B. A., and then turned to my file of the Cultivator, and reperused the paper which gave occasion for such a volume of hard words; and I must say that a more downright dogged determination to be hard of understanding than is here shown, has rarely fallen under my notice. I know not whether you will deem the tirade worthy of your notice; but with your leave, I wish to give you some of my New-England notions of the matters at issue. As I understand them, they are resolvable into two points: 1. The best means for the improvement of the great mass of cattle in the country; and 2. The continued improvement of the Short Horns themselves; for as to the bugbear inferences attempted to be drawn by A. B. A., there is not a sane man in the United States will believe a word of them.

As to the first point, you recommend the extensive dissemination and breeding from pure blood bulls, continually recurring back to such blood, and never using cross bred bulls where it is possible to avoid it. In this way, by constantly breeding upwards, selecting the best of our native cows to breed from, and using none but pure blood bulls, you think, and so will every reflecting man, that a vast and rapid improvement in our common herds might be made. What A. B. A. thinks on this subject, he has not seen fit to inform us. The improvement of the millions of our native stock is to him apparently not worth a thought.

As to the 2d point, it seems a mere question of fact, whether the Durhams as a breed are perfect and incapable of further improvement, and whether a breed in a high state of perfection can be improved by crossing it with one which, as a whole, is inferior. That the Short Horns, great as is their improvement and superiority, are perfect, no one, not even A. B. A., will be silly enough to affirm. They can be improved; and now must all the means of advance be derived from this breed alone, or cannot crossing with a breed inferior as a whole, but superior in some respects, be justifiable and successful? A. B. A. says improvement must come from this breed alone; you say they may be improved by the engrafting of good qualities, wherever you can find them. A. B. A. denies that any improvement can be made by crossing with a breed inferior in any respect; you admit the possibility of improvement in that way; and now I will go farther, and affirm that many, if not most of the real and permanent improvements in our domestic animals have originated in that very way. By taking the best of two distinct breeds and skillfully breeding from them, better animals have been obtained than could have been obtained from either, separately. What are the facts?

In that very number of the American Agriculturist containing the strictures of A. B. A., are some remarks illustrative of some London toy book engraving, inserted to represent the Arabian horse. From these remarks, I extract the first and last sentences: "The Arabian is acknowledged to be the foundation of all improvement in the breed of horses, either bred pure by himself, in other countries, as for example the English thorough bred, or by crosses, as is shown in the stocks of different nations. * * * It is generally supposed, now, that the Arabian horse can no longer improve our own or the English stock of horses, and we are rather inclined to that opinion." What is in effect affirmed here? 1. That the Arabian horse was originally the best breed, the very base of all improvement in horses—a fact indeed generally known. 2. That by crossing with other, and of necessity inferior breeds, new breeds have been produced so superior to the original stock that it is no longer useful for the purpose of improvement. Here he has conceded the whole argument. The Arabian, the Short Horn of horses, has been so improved by skillful crossing, which conferred points or qualities in which the original was deficient, though on the whole superior to all other breeds, that the base of the improvement has been thrown into the shade, and for breeding rendered comparatively valueless. I hope A. B. A. will not object to the authority I have here used; for however doubtful it might be in other cases, it must be good against himself. He may perhaps console himself by reflecting that he is not the first engineer that has been "hoist with his own petard."

And now, as to cattle, can an instance be given in which an "improvement has been effected by a cross of a superior with an inferior breed?" There can be a most striking and unanswerable one, and this A. B. A. well knew, or he would not have penned this sentence: "We suppose we shall be told of Countess, that sold for 400 guineas, the Galloway cross, and all that sort of thing." Ah! that Galloway cross is "the d—l that will kill our Ned;" a stubborn thing not to be moved out of the way, and of course to be met with a sneer. But a sneer is not an argument, and the fact of the Galloway cross must stand, unless it shall appear that A. B. A., while in England, made some wonderful discovery respecting it, equal to that which enabled him on his return to announce his manufactory of Ayrshires. What is the truth respecting this Galloway cross? Mr. Charles Colling, who did so much to improve and to bring the Short Horns into favor, crossed his celebrated Short Horn bull Bolingbroke with a fine, red, polled Galloway cow, and the result was a most happy one. In the language of one well qualified to give an opinion in the matter, "He (Mr. Colling) resorted to this cross to obviate the deterioration produced by in-and-in-breeding, which was slowly but surely leading to a hereditary debility of constitution. He not only renovated the blood of the Short Horns by the new infusion, *without injury to them otherwise*, but with masterly skill, he improved a breed already near perfection, by engrafting upon it the peculiar excellencies of another breed, in the main far inferior."*

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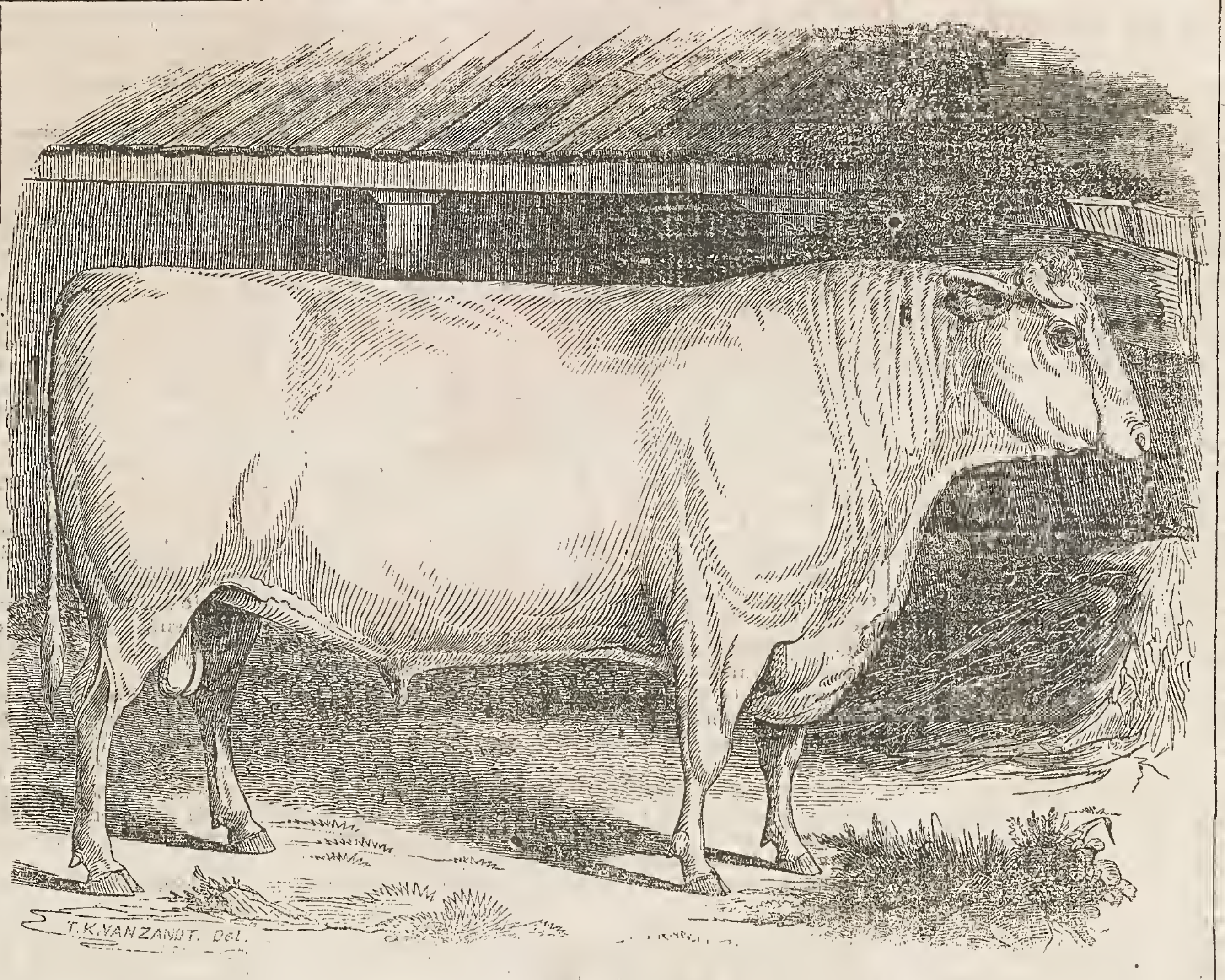
* For further particulars, see the Essay of H. S. Randall, Esq., vol. VII. Cultivator, page 94.

So here was a breeder, against whom A. B. A. dare not wag his tongue, guilty of what he elegantly characterizes, when suggested as possible by you, "as gross and perfect a piece of absurdity as we ever heard." It will require more than a sneer to make breeders believe that this infusion of inferior blood has ruined the superior breed, since there is scarce a herd of Short Horns in the United States that cannot be traced to this source. Yet according to "the only true principle" of A. B. A., this cross ought to have given the "alloy" *all* the bad points of the inferior breed, left the Short Horns without any horns at all, and thrown back the improved breed to the condition in which it was before. It either did this, or the true principle of A. B. A. must be classed with his other repudiated ones. Let breeders decide.

Now, Messrs. Editors, the object to be kept in view is the improvement of the stock of the whole country as fast as possible, and I believe the method pointed out by your article is the way to do this. Certain it is, that if it should be adopted, the demand for pure blood animals, for a time, would be increased a hundred fold. Every farmer who could obtain a pure blood bull, would find that by doing as Colling did, taking one cross from the best native cows he could find, and then breeding back to the pure blood, his stock would rapidly improve; while no good reason can be given why an actual advance towards greater perfection should not be made by such crosses now, as well as in the case of Colling himself.

A Breeder.


T.K.VANZANDT. Del.

MR. CROSBY'S DURHAM BULL OSCEOLA.—(Fig. 70.)

IMPROVEMENT OF DOMESTIC STOCK.

Messrs. Gaylord & Tucker—Your article under this head, in the July no. of the Cultivator, has elicited from Mr. Allen, in the August no. of the Agriculturist, some remarks of disapprobation. I am not about to obtrude myself as an *ally* in defence of the positions you have assumed; you are undoubtedly able to fight your own battles; but some of Mr. Allen's ideas have induced me to propound to him, through this medium, a few interrogatories. Mr. A. says:—

"Now the only true principle of improvement in breeding which we ever heard of, is this: if an animal be deficient in any one point, or more, it must be crossed by another animal *equal* to it in all its *good* points, and superior to it in all its *deficient* ones; and then the chance barely is, that one-half of the produce may be *equal* to the *superior* animal thus used in the cross, and the other half not *inferior* to the *poorest.*"

Now if this is "the only true principle of improvement in breeding," how would it be possible for the progeny ever to attain any greater perfection than was possessed by the progenitors? Suppose a breeder to have cows that possess, say ten good points, which he puts to a bull that has twenty,—by this principle, if I understand it, the offspring would have fifteen, and the offspring of these, bred to a bull of twenty good points, would have seventeen and a half; and how could the breeder ever obtain in the progeny as *much* perfection as one of the progenitors had in the beginning? And how have animals ever been produced that were any better than others which have preceded them, or how can we hope to produce such? How could Bakewell, on this principle alone, have ever bred any better cattle or sheep than he had in the beginning? Or is it denied that Bakewell, as well as Colling and others, ever made any actual improvement on the stock with which they commenced?

It has been asserted that there is "*one man's herd*" in England that are so much superior to all others, that *we* should look to them alone for improvement; and if there are animals in that herd which are really *superior* to their progenitors, by what "principle of improvement in breeding" did they become so?

As this is an important subject, I trust the public may receive all the information upon it which any one is able to give.

As to the milking properties of the improved Short Horns, I hope their breeders will not take your remarks on this point in *dudgeon*, (for I see no evidence that they were dictated by prejudice or ill will,) but let those breeders come up *promptly* to the work of *demonstration*, and that will be the end of argument. Let a fair and full exhibition be made of the products of the Short Horn dairies, and a comparison instituted between these and others, and that will settle the point. Until this is done, *writing* and *talking* are of little use.

The *origin* of the improved Short Horns, is a subject that may open a wider field of controversy than it may be expedient to enter upon at this time. *†.

DURHAM BULL OSCEOLA.—(Fig. 70.)

Messrs. Gaylord & Tucker—I herewith send you a portrait of my Short Horn Bull Osceola, taken by that excellent artist, T. K. Van Zandt, in which he has done himself great credit.

Osceola is a pure white animal, and was calved 30th April, 1842. He was bred by Henry Whitney, Esq., New-Haven, Conn., (whose stock you will remember, was so justly admired at the State Fair last fall;) got by Tempest—dam, Ringlet by Belshazzar, 1704—gr. dam, Rose by Navigator, 1260—g. g. d. by Jasper, 331—g. g. g. d. by Marshal Beresford, 415—g. g. g. g. d. by Cecil, 120—g. g. g. g. g. d. by a son of Favorite, 252.

Tempest, by Merryman—dam, Strawberry, (considered by judges the best animal of her kind in the country,) by Ambo, 1636—gr. dam, Fair Helen by Young Albion, 15—g. g. d. Miss Foote by Pilot, 498—g. g. g. d. Fair Maid by Agamemnon, 9—g. g. g. g. d. Madam by Marshal Beresford, 415—g. g. g. g. g. d. Tube Rose by the Lame Bull, 359—g. g. g. g. g. g. d. Moss Rose by Suwarrow, 636. Merryman by Berryman—Berryman by Henwood—Henwood by Wharfdale.

I will merely add that Ringlet the dam, was imported by Mr. Whitney, and that Tempest the sire was imported *in* Strawberry. Yours, &c.

Clarkson F. Crosby.

Watervliet, N. Y., Aug. 21, 1843.

SHEEP ON THE PRAIRIES.

Messrs. Editors—Now a days much is said about covering the western prairies with sheep. I never visited them; but when I hear of the laudable terms in which they are represented, as opening a great field for the flockmaster, it puts me in mind of some of the disadvantages as well as advantages in raising sheep there. I will give some hints wherein I think it might prove an unsuccessful operation. I have no doubt but that some parts may do tolerably well, while others are very unfavorable and uncertain for this delicate animal. I am inclined to believe that the western country at large, is not as favorable as Vermont for wool growing.

In fact, I do not know of any large tract of country, where sheep succeed as well on level lands as they do on more hilly and mountainous. I understand that the prairies and a great portion of the western states are level, or are not interspersed with ranges of mountains sufficient to break off the sweeping winds. Large prairies are subject to heavy wind and storms, and there is a dampness that prevails throughout that western country, called night air, which we do not experience much of near the Green mountains. Sheep are fond of hills; it is their nature; they climb them to seek a lodging ground to rest through the night, where they can breathe the free and pure air. England and Ireland have tried the experiment faithfully on the various breeds of merinoes, with very little success; which is more probably owing to the evenness of the country, subject to winds, and the general dampness of that climate. The stagnant pools and humidity of the western country, will always subject it more or less to malaria, and an abundance of annoying insects. Sheep appear very sensitive when stung by these carniverous insects, which do not abound with us in great numbers.

Another objection is, their winters are not so even as they are with us. We have but a few days variation in the length of our winters, and lay in stores to feed our sheep from the middle of November to the latter part of April. But at the west, they fluctuate; some years they experience but little or no winters. I gathered from the western papers, that the last winter was windy, long and cold, which held out five months longer than usual. A poor calculation could be made for such a winter. Suppose that millions of sheep were on these prairies last winter, most of them would inevitably have perished, which would put a damper on the most resolute. I contend that no breed of fine wooled sheep can succeed well in a level windy country No animal appears more sensitive than the sheep in a wind; they turn like a weathercock; only there is this difference, instead of heading the wind, they wheel the other way. They are careful to select, on the appearance of a storm, the best shelter within their reach. Heavy rains injure them, and nothing is worse than sleet, or a rain that freezes as it falls. Nearly half of our water falls in snow, which does not injure sheep at all. When out of the wind, they appear to enjoy themselves as much in a heavy snow storm as they do in a clear day. The northern part of New-York is a fine grazing country, but is not as well adapted for sheep as Vermont. The objection in St. Lawrence and Franklin counties, of a level and rather windy country, is, in my opinion, the cause of such mortality among them.

Much is said about prairie grass being excellent for sheep; it may answer for small flocks, but I have my doubts about stocking as close as we do in Vermont, or anything like it. Sheep will subsist in the woods, give him a large range to select his foliage, but put him in to eat all within his reach, or one-tenth part, and he would sicken and die. White clover they eat with avidity; we abound in that kind of grass; our fields on this day, literally white with its blossoms.

Some say that government lands can be occupied for grazing without rent fee; no doubt but something may be done that way, but no permanent chance presents itself, and no prudent flockmaster will ever depend on government lands to keep a very large flock. Wolves that abound in these western prairies would make sad havoc among them also. And there are other obstacles which present themselves, of great account, more to disparage than any I have mentioned. It is the distempers that may prevail among them. Scale and foot rot are contagious diseases; and what, let me ask, can any breeder do, if this distemper be spread over the western wilds, among his "thousands of sheep?" Methinks that in that humid climate and level country, where great flocks range together, there would be many ragged coats and sore toes, from one year's end to another. Neither of the above diseases can be eradicated, while they occupy the same grounds, without heavy frosts. This will kill all the infection lodged on the ground; but as long as frosts hold off, so long the exposure is before them. Nothing but small flocks, and small enclosures that will keep separate flocks of one hundred or less, will give the shepherd any chance of success in curing these diseases. But when they are in long ranges, no enclosures, and large herds together, it will baffle the most skillful to cure these contagious disorders.

Every soil and climate has its peculiarities, better adapted for certain productions than any other country. The raising of cotton, for instance, in the East Indies, has been trumpeted in the ears of the cotton growers of the southern states, that they were soon to be crowded out of the markets of Europe, but it appears on a fair trial that they never can compete with us; there proves to be many objections in situation and climate that cannot be overcome, and such cotton as they do raise is inferior in quality to ours.

I am not yet alarmed about the ruin of Vermont in the great and successful competition at the west, in the growing of wool. If some of those objections that I have mentioned can be easily overcome, I think that others among them are formidable ones. Time will test the question, and we shall continue on in our usual avocations until we find others more pleasant and profitable.

Yours, S. W. Jewett.

Weybridge, Vt., July 19, 1843.

The Garden and the Orchard.

SIX REASONS FOR PLANTING AN ORCHARD.

1. It will make home pleasant. 2. It will remove from your children one of the strongest temptations to steal. 3. It will make your family love their home. 4. It will, by the comfort produced, create a feeling of gratitude to the Giver of all good. 5. It will prove a valuable inheritance to your children. 6. It shows a willingness to avail yourself of the means of happiness a kind Providence has placed within your reach.

FIGURES AND DESCRIPTIONS

Of Five Varieties of Cherry, deserving a place in every Garden, by A. J. Downing.

I. Mayduke.

Among all the new varieties, nothing as an early cherry, has been found to supplant the Mayduke. Before it is quite fit for table use, it is admirably adapted for cooking; and when fully ripe, it is the richest of the sub-acid cherries. A peculiar habit of this tree, that of producing very frequently some branches which ripen later than the others, considerably protracts the season in which its fruit is in use.

Form nearly round, slightly flattened at both ends. Color when fully ripe, a rich dark red. Stalk of medium length, inserted in a moderate hollow; on large trees the fruit grows in clusters. Flesh tender, melting, and very juicy. Flavor, pleasant acid, becoming richer until the fruit is over ripe. The tree is an abundant bearer, and is easily known by its firm dark colored leaves and upright habit while young. About New-York, the fruit reddens about the last of May, and ripens during the first half of June.

The Mayduke Cherry.

II. Belle de Choisy.

(Ambreé de Choisy.)

This is a very fine variety, which originated at Choisy near Paris. The habit of the tree, the color of the foliage, and the size and form of the fruit, resemble those of the Mayduke. In the color of the fruit, which may be said to be that of *cornelian,* and in its exceedingly sweet and delicate flavor, it is however very distinct, and it is certainly one of the most delicious dessert cherries. It is not generally known in this country, but is deserving of extensive cultivation, as it bears early, regularly and well.

Form of the fruit nearly round. Color, in the shade, pale amber; in the sun mingled with yellowish red, finely mottled. Those fully exposed, become bright cornelian red. Skin very thin and translucent, showing a net-like texture of flesh beneath. Flesh very tender and melting. Flavor sweet, juicy and sprightly. Stalk rather short, swollen in size at the upper end. It ripens directly after the Mayduke.

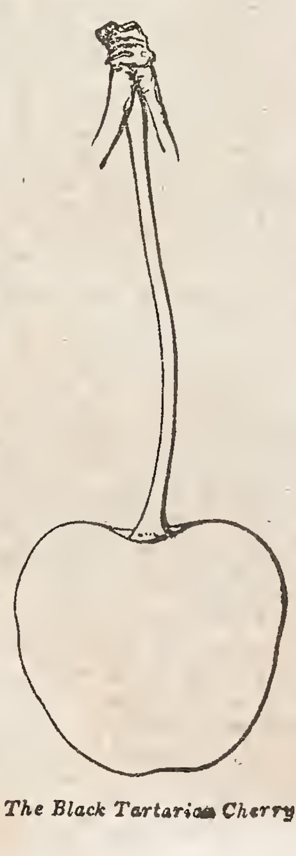
The Belle de Choisy Cherry

III. Black Tartarian.

(Circassian.)
(Fraser's Black.)
(Ronald's Black Heart.)

This admirable fruit has already become a general favorite in all our gardens; and for size, flavor and productiveness, it has no superior among black cherries. It is a Russian and West Asian variety, introduced into England about 1796. It is remarkable for its rapid vigorous growth, and the erect habit of its head. The fruit ripens about a week or ten days after the Mayduke.

Fruit of the largest size: form heart shaped, irregular or uneven on the surface. Color, bright purplish black. Flesh thick, (the stone being proportionately small,) half-tender and juicy. Flavor very rich.



The Black Tartarian Cherry.

IV. White Bigarrieu

(Graffion.)
(Bigarrieu Gros.)
(Yellow Spanish of many Am. Gardens.)

This well known variety is one of the very best of the light colored cherries, being large, very handsome, and an abundant bearer, even while the trees are young. The tree is one of the thriftiest growth, forming a wide spreading head. The leaves are large and broad, and the lateral shoots are almost horizontal.

Fruit of the largest size, and of very fair and and beautiful appearance. Form, obtuse heart shaped, a little swollen on one side. Color, clear white or pale yellow on the shaded side, bordered with minute carmine dots, deepening into bright red on the sunny side. Stalk of good size, inserted in a wide hollow. Flesh very firm, solid and juicy. Flavor moderately rich and sweet. Ripe the last of June.

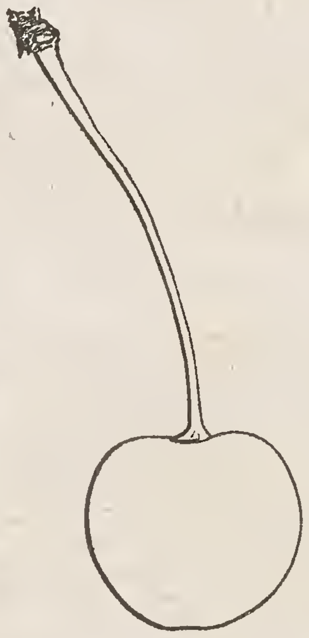
The White Bigarrieu Cherry.

This is a very favorite dessert and market fruit, and is very generally known in the American nurseries as the Yellow Spanish. The true Yellow Spanish, however, is an oval or heart shaped yellow cherry, called also Lady Southampton's Yellow, which is scarcely known in this country.

V. Downer's Late.

This valuable late cherry was raised by Samuel Downer of Dorchester, near Boston. It is a very regular and excellent bearer, ripens about a week after the cherry season, and hangs for a considerable time on the tree. It belongs to the class of tender fleshed, melting cherries, and deserves extensive dissemination.

Form roundish, inclining to oval; the fruit medium size, very smooth. Color, bright red, mottled with a little amber in the shade. Flesh tender, melt- and juicy. Flavor very sweet and excellent. Stem inserted with a very slight depression. Fruit borne in clusters. Ripe about the 4th of July.



Downer's Late Cherry.

Highland Horticultural Nvrseries, Newburgh, Aug 15, 1843.

SELECT LIST OF APPLES.

We have received a descriptive list of about 40 varieties of apples cultivated by A. Hampton, near Richmond, Wayne co. Indiana, many of which we believe will be new to most of our readers, and would prove valuable acquisitions. We have taken the liberty to omit some of the descriptions of those varieties which are well known, or which have been described in Coxe, Kenrick, and other works. We have, however, retained the names in the order in which they occur, as they appear to be placed according to the times of ripening, and may prove valuable for a comparison of climates. An apology is due our correspondent for the long and unexpected delay in the publication of his article.

Yellow June—Juneting of Coxe.—Size small, form flat, color pale yellow; a pleasant eating fruit, not highly flavored; a good bearer; ripens in the 6th and 7th months. This is considered the earliest apple of our country.

Yellow Harvest—sometimes called *Prince's Harvest.*—Commences ripening middle of 7th month.

Kirkbridge White.—Size medium, resembling the Yellow Bellflower in shape; color a pale yellow; flesh white, tender, and breaking; not very rich, but sprightly and juicy; a good bearer; commences ripening about the middle of the 7th month, and continues for several weeks; the trees grow upright and strong. This variety I have not seen described by any of the writers on fruit.

Sweet June.—Rather below medium size; form round, somewhat flattened at the ends; color a pale yellow; a sweet apple, much admired by some; a good bearer; commences ripening late in the 7th month.

Early Red Juneting.—Last of 7th month.

Yellow Bough. (Sweet Bough.)—Ripens 7th and 8th months.

Carolina June or Sapsonvine. (Sapson.)—Ripens from 7th to 9th month.

Early Red.—Over medium size; form round, somewhat flattened at the ends; color red, with a small portion of dull yellow stripes; more admired for its size and beauty, than any excellence in flavor; a saleable apple in market; the flesh being firm and rather dry, it keeps well as a summer apple for transportation. Ripens early part of 8th month; a good bearer.

Summer Queen.—Commences ripening early part of 8th month, and continues successively for three or four weeks; not very productive when young; when large they become very fruitful.

Red Stripe.—Size large, long shaped, pointed towards the blossom end; color red and yellow striped, fair and beautiful; the flesh brittle and juicy, well flavored, excellent for cooking. It is generally considered preferable to the Summer Queen, being a better bearer and ripening about the same time, which is the early part of the 8th month,—good for use through that and the next month. I have never seen this variety described by any of the writers on fruit. I obtained it from Silas Wharton's nursery, near Waynesville, Ohio, upwards of 25 years since.

Daniel Apple.—Size below medium; form round; color pale yellow, with faint red stripes and spots, generally a small portion of red; it possesses great richness, with a sprightly, pleasant acid; soft flesh; a good bearer; it commences ripening early part of 8th month, and ripens in succession for several weeks, and keeps for use till late in the fall. I consider it among the best apples for fattening hogs and cattle. I obtained it also of S. Wharton; it originated near Philadelphia some 40 years since.

Summer Pearmain.—Ripens early part of 8th month.

Trenton Early or English Codlin.—A fine fruit for pies and stewing; the size large, the form somewhat oblong; the skin a bright pale yellow, with frequently a faint blush towards the sun; the flesh white, tender, and well tasted; commences ripening middle of the 8th month, and continues in season till late in the tenth month; a good bearer.

Maiden's Blush.—Commences ripening late in the 8th month.

Wine Apple of East Jersey—Red Calville of Kenrick.—Fruit of medium size, frequently large on young trees; form somewhat flat; of a beautiful red color, bright red next the sun; flesh somewhat yellow, and of a vinous and sweet taste, very rich, without acid; it ripens in the 9th month, and keeps till winter. An abundant bearer every other year, and at intervals frequently a middling crop.

Rambo.—Ripens in autumn.

Fall (not Holland,) Pippin.—Ripens in 10th month.

Monstrous Pippin, or New-York Gloria Mundi.—Good for cooking and drying. Keeps till midwinter.

Newtown Spitzenburg.—A large round and fair apple, somewhat flattened at the ends; the skin a deep red, full of small yellow dots near the crown; the flesh is yellow, rich, and highly flavored; it ripens in the 10th month, and falls from the tree; but if properly treated will last for several months; a good bearer.

Watson's Vandevere.—A large fair apple; red and yellow striped; form round, full at the blossom end; coarse grained, not very sprightly, good for cooking and drying; winter apple; a good bearer.

Golden Russet, Bullock Pippin, or Sheep Nose.—Below medium size; skin inclined to a russet; flesh yellow, tender, rich, juicy and sprightly. I know of no apple more generally admired for its richness and excellent flavor than this; commanding a high price and ready sale in market. A great and constant bearer; keeps well till spring.

Yellow Bellflower.—Keeps through winter.

Vandevere Pippin.—The size, color, and form, resemble Watson's Vandevere, except that it is more red and handsome, and indented at the blossom end; tolerably good for the dessert and for cooking, excellent for drying; keeps through the winter; a good bearer.

Rhode Island Greening.—Keeps till mid-winter.

White Pippin.—A large handsome apple; form somewhat flat; color a clear pale yellow, approaching to white; flesh white, brittle, juicy, and well flavored; ripens in succession through winter; a good bearer.

Romanstem.—Middle size, form round, often a fleshy protuberance near the stem; the skin is rough, a pale yellow, with black clouds and spots; it is much admired for its tender, mild, juicy, soft and agreeable properties; the tree is handsome and very fruitful; in every respect worthy of extensive cultivation; keeps till spring, retaining its excellent flavor.

Red Winter Pennock.—Keeps through winter; subject to the bitter rot.

Red Baldwin.—Ripens in 11th month, and keeps till 3d month.

Aunt's Apple.—Keeps well through winter—very fruitful.

Smith Apple.—Over medium size; on young trees they frequently grow very large; form round, even at the blossom end; the skin is smooth, a lively red, some with dull streaks of yellow, where exposed to the sun a bright red on every side: a pleasant table fruit, rich and juicy; of a yellow color; keeps well through winter; the tree grows upright and strong, and bears abundantly every other year.

Michael Henry Pippin.—Keeps well through the winter.

Black Apple.—Ripens in 11th month, and keeps till late in spring. Bears very young and abundantly.

Red or Sweet Pippin.—Keeps well till late in the spring.

White Pearmain.—Over medium size; of an oblong shape, pointed towards the crown: color a dull yellow with dark clouds; the flesh firm, brittle, rich, juicy, saccharine, and highly flavored, nearly without acid; very generally admired as a first rate fruit; keeps well through the winter; trees thrifty, with a spreading top; sometimes they are greatly loaded with fruit; the apples grow in clusters.

Winesap.—From 12th month to 6th month.

Neverfail or Geniting.—Middle size; form round, somewhat long, lessening towards the crown; color red and yellow striped; the flesh is tender, juicy and well flavored; keeps as well as the Newtown pippin or Winesap; nearly two weeks later than common apple trees in leaves and blossoms in spring.

Green Newtown Pippin.—Some object to this variety on account of it slow growth, and a long time coming into bearing; but that fault can be remedied by grafting or inoculating on good thrifty bodies. Upwards of 30 trees of this sort, all grafted on seedling bodies, more than 20 years since, came into good bearing nearly as soon as most other varieties planted at the same time.

From the best information that I have obtained, I have reason to believe that the Newtown pippin will not often come to good maturity much north of the 41st degree of latitude, except in some warm situations. They require longer and warmer seasons to get their growth to perfection than any other choice varieties I am acquainted with, except the Limbertwig, said to be a capital variety in the south, and which does not come to good maturity as far north as 40° lat.

American Pippin.—[This variety we consider wholly unworthy of cultivation,—as it continues insufferably hard until it has lost all its flavor in ripening, and is much inferior as a keeper to some other far better varieties.—Eds.]

Wintergreen.—This apple is of a moderate size; the form nearly round, somewhat tapering towards the blossom end, which is full and even; color dull green at the time of gathering winter fruit; they do not come to perfection for use till the 3d month, at which time they become a pale yellow; the flesh is of a dead sweet, very rich, of a yellow color; with proper care they will keep till harvest. Bears abundantly and constantly.

The above described varieties of apples, I have with great care and attention, selected from several hundred sorts of grafted fruit, principally from the nurseries and fruit gardens in the eastern states; some choice fruit from the south, which are calculated for family use, ripening in succession most of the year.

The time of ripening is calculated for the 40th degree of latitude; but will vary with the age of the trees, different situations, or changes of the seasons.

ANDREW HAMPTON.

Six miles north of Richmond, Indiana, 1st mo. 1843.

ASHES FOR PEACH TREES.

We advise our readers who have peach trees, to place ashes around them at the surface of the ground, not leached, but new ashes. And they will do no harm if put around quince, pear or apple trees, since all of these are more or less subject to the attacks of worms at the surface of the earth, and ashes are found to be one of the best preventives of the borer, as well as one of the best auxiliaries to the growth of the tree. For the quince bush, we have found nothing equal to blacksmith cinders and coal ashes; and those who have these materials, may turn them to good account by this use of them. The ashes should be applied two or three times in the course of the summer, commencing in June.

SMOKING ORCHARDS.

In the last number of the Journal of the Royal Ag. Society, is an account of a successful mode of preserving orchards from the caterpillar, &c. by smoking them. The smoking is done by placing a large iron kettle on four low wheels, and putting in it dry wood, weeds, rubbish, and some brimstone, and kindling it with a bellows, which drives a strong and continual stream of smoke through a moveable tube, to every tree, and every part of a tree in succession. The smoking being commenced on the windward side of the orchard, and followed row by row, the moth and apple weevil, and black apple fly, will be driven out and the crop saved.

SAVE YOUR SOAP SUDS.

There is scarcely a plant that is not benefitted by watering with soap suds. It furnishes nutritive matter as well as moisture; keeps off insects, and promotes a rapid growth. The Gard. Chronicle states that while there has been a great failure in the cabbage and cauliflower gardens generally, those watered with soap suds have produced plants of the finest quality, and entirely escaped the injuries inflicted by insects upon others.

Curious Horticultural Fact—Third Crop Apples.—The following is an extract from a letter received at the office of the *Phil. Forum*, from Portsmouth, Ohio. The apples sent, were exhibited deservedly as a curiosity.

"My June apples were ripe on the first of June, and in blossom for a second crop which ripened the last of July, with blossoms for a third crop which ripened the last week in September—at which time the tree was in blossom for the fourth time—the fruit was blighted by the frost when the apples were of the size of a robin's egg. A few bunches of blossoms were observed on the tree in the beginning of November. An opportunity offering, I send you three apples—the bottle being small, I had necessarily to send you small apples—but they will serve as specimens of a great *narural curiosity*. My June apple tree, which blossomed five times last year, and yielded *ripe fruit three times*, is again covered with blossoms thicker than ever this spring."

LICE ON CABBAGE.

Maj. S. has lately succeeded in destroying the lice on cabbage and other plants, by sprinkling them with a strong decoction of tobacco, walnut leaves, and the leaves of the pride of China.

Pendleton, S. C., Aug. 5, 1843. J. B. S.

The Plum Curculio killed by Salt.—Capt. Lovett of Beverly, informs Mr. Hovey of the Magazine of Horticulture, that by applying about half a peck of salt around each tree, spreading it as far as the branches extend, he, as well as some others who have tried it, have saved their fruit from this insect. The time to apply it, is about the first of June.

Mildew on Gooseberries.—The great difficulty with which gooseberry growers in this country are obliged to contend, is the mildew, which in most cases renders the imported varieties worthless. The Farmer's Gazette states that the mildew is prevented by sprinkling fine salt around the bushes, or where it can be had, by placing sea weed around them. Watering with soap suds, before the fruit forms, and using compost for manures, is also good.

Strawberries.—This month is the best time for planting strawberry beds. Abundant directions for their culture, will be found in our previous vols.

Domestic Economy.

INTERESTING EXPERIMENTS ON THE MAKING OF BUTTER.

In the 1st no. of the new series of the Quarterly Journal of Agriculture, we find a valuable paper by Prof. Traill, on the making of butter, the principal results of which we have condensed for this no. of the Cultivator. In making the experiments the milk of several cows was mixed, strained, a certain number of pints taken, and the cream churned in glass vessels. The whole series was conducted with the greatest nicety and accuracy. The objects proposed, were to ascertain the comparative advantages of churning,

1. Sweet cream alone.
2. Sweet milk and cream together.
3. Sour cream, or that slightly acid.
4. Sour milk and cream together.
5. Scalded or *clouted* cream.

The experiments also embraced the rise of the temperature of the cream in churning, which was found to be from 6 to 8 degrees; the effect of external temperature; and that of adding water to the churn, as practiced by many. The difference in the yield of butter between the first milk drawn and the last, or the strippings, was also ascertained.

Experiment 1. Value of the first and last portions of milk.

No. 1. First pint milked. Quantity of butter, 31 grs.
No. 2. Pint of the whole milking, ... 252
No. 3. Last pint of the milking, ... 416

In one instance the difference was still greater, the first pint yielding only 5 grains, and the last 551 of butter. An experiment was made to ascertain the quantity of curd yielded by the first and last portions, but the difference was scarcely perceptible, showing that the quantity of caseine throughout the milk is nearly the same.

Experiment 2. This was made on sweet cream, sweet milk and cream, sour cream, sour milk and cream, and scalded cream. Three quarts of milk of the same quality were used in each case.

No. 1. Sweet cream alone. Gave of butter, 1386 grs.
No. 2. Sweet milk and its cream together.
Churned 3 hours, but no butter.
No. 3. Sour cream alone, ... 1756
No. 4. Sour milk and its cream together, .. 1968
No. 5. Scalded cream alone, ... 1998

The butter of No. 1, was of a good color and well flavored; that of No. 3, in both color and taste was good; No. 4 was paler, but flavor good; No. 5, was of a rich yellow color and of good taste.

Experiment 3, was a repetition of the foregoing. Not quite as much butter was made, as it was a month later in the season; and as before, no butter was made from the sweet cream and milk. From these and other experiments, it was proved that scalded cream, or that taken from scalded milk, gave the most butter; the next sour milk and cream; the next from the slightly sour cream; and the smallest quantity from the sweet cream. In none of the experiments could butter be made from the sweet cream and milk together.

Experiments 4 and 5, were made to determine the time in which, with the same exposure, rancidity commenced. It was found that the butter from the scalded cream kept worst; then that of the sour milk and cream; then the sour cream; and the best was that from the sweet cream.

Experiment 6, was made to determine whether the liability to turn rancid was not in proportion to the amount of caseine or curd in each. Experiments showed this to be the case, the kinds containing the most curd being those which exhibited rancidity the earliest. This proved the necessity of perfectly freeing butter from all milk after churning.

Experiment 7, was instituted to ascertain the effect of overchurning, or continuing the process after the full separation of the butter. It was found that the quantity of butter was considerably increased, when the churning was continued half an hour after the butter had formed; but the product was pale, soft, and of an inferior quality, as compared with that churned the necessary time only.

Experiment 8, was instituted to determine whether the addition of either cold or hot water to the cream in churning, had any influence on the quality or quantity of the butter. The experiment showed that the addition of warm water shortened the period of churning a trifle, gave a little more butter, but injured its quality much. Cold water appeared to produce little effect any way, unless the external temperature was very great, when it rendered the butter more solid and improved the quality.

In each case a number of experiments were made, and the results are therefore more satisfactory than a single experiment could have been. Some of the principal of these results are as follows:

1. The addition of some cold water is useful, when the cream is thick and the weather hot.
2. That cream alone is more easily churned, than a mixture of cream and milk.
3. That butter from sweet cream has the best flavor, and keeps the longest.
4. That scalding the cream gives most butter, but becomes rancid soonest.
5. That churning the milk and cream together when slightly acid, is on the whole the best process.
6. That the keeping of butter depends on its perfect freedom from caseine or buttermilk.

A BUTTER TABLE.

Messrs. Gaylord & Tucker—I will attempt to say a word on the subject of butter making. There has been quite enough said about milking, setting the milk, churning, &c.; my object will be to attend to some small essentials after the butter is churned. One positive direction is, never touch it with the naked hand, for it assuredly gives it a greasy, oily taste. Some persons may say that I throw myself into the hands of the critic, by saying that butter is greasy, but they are welcome to make what they can out of it. I will give you a specification of a simple machine to separate the butter from all the liquid matter: and if any person can improve on it, or describe a better one, the information will be gratefully received. The one I have in use, is a maple plank or board, three feet long, two feet at one end, six inches at the other, a true taper on each edge, with strips six inches wide, nailed on the two sides; there are cleats at each end on the under side, in which is inserted at the narrow end, a leg 17 inches long, and two legs at the wide end, 22 inches long. On the surface of the board, near the narrow end and in the center, is an iron staple; a stick of maple 3 inches square, 3 feet 10 inches long, a little tapering, a gudgeon in the end, with a flat head that will turn into the staple; the other end may be turned or shaved to form a handle. Butter on this board, worked and pressed with this stick, has the benefit of the liquid substance constantly draining from it as the working progresses, and the labor can be performed in a quarter of the time, much better, and much less laborious exertion, than any other plan that has come to my knowledge. A Saratoga County Farmer.

Aug. 8, 1843.

CURE FOR SALIVATION, &c.

Messrs. Gaylord & Tucker—I send you a recipe to cure the scurvy or salivation. I have never known it to fail. If you think proper to put it in your paper you can do so. Scrape off the outside of persimmon bark—take as much of the bark as can be grasped between the thumb and fore finger—the same quantity of the bark of sumach root, the same of red shank or red root, the same of common pine root, (small pieces,) the same of parsley roots and tops; put all into two quarts of water, boil slow until it is reduced to one quart; then add half pint vinegar, half pint of honey, one ounce alum, one do. of saltpetre; after it settles, pour off into bottles; use often through the day in rinsing the mouth, gargling, &c.; use it immediately after meals. There is no danger if it was swallowed—no necessity for swallowing.

Thos. J. Holmes.

Concord, Baker co., Geo., 1843.

FRENCH SAVORY SAUCE.

To 4 lbs. of veal fat from the kikneys, cut small, add 1½ lb. ham, 1½ lb. rasped bacon, 5 or 6 chopped carrots, 8 small onions, a large bunch of parsley, 3 cloves, 2 bay leaves, some thyme, basil, mace, 3 lemons, (sliced without peel or seed,) and 1 lb. of butter; boil them in any weak broth; skim; simmer for five or six hours; strain and keep the liquor for use.

FRENCH MODE OF COOKING POTATOES.

When the potatoes are boiled, cut them in slices and put them in a sauce pan; pour some onion broth over them; then add a piece of butter and keep the potatoes hot without boiling. Slice eight onions, and set them on the fire; when they are tender, take a large spoonful of flour which is to be well mixed with them; add salt, coarse pepper, a small table spoonful of broth or water, and a dash of vinegar. Let the onions gently simmer for a quarter of an hour, place them on the potatoes, and keep them hot till served.

BLACKBERRY SYRUP.

THE following directions for preparing this article, pleasant for the taste, and the best remedy for the summer complaint among children, we find in the Maine Cultivator. To 2 quarts of the juice of blackberries, add one lb. of loaf sugar, half an ounce of nutmeg, half an ounce of cinnamon, pulverized. To this add half an ounce of cloves, and quarter of an ounce of allspice, pulverized. Boil all together for a short time, and when cold, add a pint of proof brandy. Bottle carefully, and keep in a cool place for use.

TOMATO KETCHUP.

BAKE your tomatoes, ripe and peeled, in a brown earthen pan, in a cool oven; then press out the juice and pulp through a sieve. Next to each quart of juice and pulp add ¼ lb. of salt, 2 oz. of shallots (or onions,) 1 oz. of ground black pepper, quarter of an ounce mace; the same weight of allspice, ginger and nutmeg. Pound the spices together and boil them with the tomato pulp half an hour; then pass the mixture throuph a sieve, and when cold bottle it. This will keep good for years.

TOMATO SAUCE.

TAKE ripe tomatoes, cut them in two, press out the pulp and separate the seeds; then put them into a skillet with some savory sauce and a little salt. When of the thickness of pea soup, rub it through a coarse cloth, boil it to the consistence of marmalade, put it into jars, and in a day after pour over it lard or butter, and tie down with oiled paper.

FACTS AND OPINIONS.

Abstracted from Books and Journals for the Cultivator.

AVERAGE CROPS IN SOUTH CAROLINA.—The following statement is given in a report of the Wateree Ag. Society, (S. C.) published in "The Planter" of August 9. Surely no better evidence need be required of the necessity for an improved system of agriculture:—"High land improved, will average from four to five hundred pounds of cotton in the seed; in corn, about ten bushels; from seventy-five to one hundred bushels sweet potatoes; seven to eight bushels of oats; five or six bushels of rye; peas in corn, two bushels. The swamp lands, unimproved, will average, when not destroyed by water, 700 lbs. seed cotton to the acre, and about twenty bushels of corn, (if changed from cotton to corn;) oats, fifteen or twenty bushels; rye, ten to fifteen bushels; peas in corn, two to four bushels; but are not good for sweet potatoes."

CORN IN SOUTH CAROLINA.—A correspondent of the Charleston Mercury says that Mr. B. R. Smith, near that city, last year succeeded in raising 67 bushels and 18 quarts of Indian corn to the acre, and that it is believed by good judges that his crop this year will not fall far short of 100 bushels per acre. "The land on which the present crop is planted was originally poor and much exhausted by injudicious cultivation. It was thoroughly plowed, and manured with stable manure in proportion of 60 single cart loads to the acre. The corn was soaked in saltpetre, rolled in gypsum, and planted on a flat surface in double rows, the stems 18 inches apart, in rows of four feet. Very little use was subsequently made of the hoe; the cultivator was run through it a few times. The luxuriance of the growth kept down the grass, and rendered all farther culture unnecessary."

CONSUMPTION OF FOOD IN LONDON.—The editor of the Albany Evening Journal, now abroad, in a recent letter from London, says:—"I was wondering this morning how much 'provant' was required to furnish this army of people with rations. An inquiry shows that 12,000,000 bushels of wheat are required annually to supply London with bread; that 120,000 tons of fish are caught here annually; the annual consumption of butter is estimated at 40,000,000 lbs., and the price varies from 25 to 37½ cents. Of meats I can get no estimate, but there is brought annually to Smithfield Market alone, 180,000 oxen, 450,000 hogs or pigs, 1,350,000 sheep or lambs, and 25,000 calves. Of milk, it is said that 11,000 cows supply the metropolis with 8,030,000 gallons annually, at an average price of 1s. 10d. per 8 quarts, (about 5 cents per quart.)

IMPROVEMENT OF SANDY LANDS.—The Hon. Wm. Clark of Northampton, Mass., as we learn from the *N. E. Farmer*, has "several hundred acres of light lands, which he has undertaken to improve, mostly by the turning in of clover. His first growth is usually small, but the second, which comes from the seed of the first, is usually very much better. Some of the lands after a growth of clover has been grown upon them, and plowed in, are put to corn, but the larger portion are sowed to winter rye. Mr. C. stated that he sowed last summer and autumn, from 150 to 175 bushels of rye. Some of his fields of this grain looked very well, but others will not yield very large crops. Mr. C. does not expect large crops at present. His object is to make these lands pay for the annual expenditure upon them, and at the same time keep them in a process of regular improvement. If a few years shall show that he can do this—and we think he will do it—then his method will be highly valuable to hundreds and thousands of farmers who are doomed to work in sand and gravel."

GOOD COWS.—Mr. E. D. Allen, of Le Ray, Jefferson co., N. Y., made, in the months of May and June, from his dairy of ten cows, eight tubs of butter, weighing eight hundred and seventy-two pounds, (nett weight,) being a fraction short of forty-four pounds per month per cow on an average. The Jefferson dairies are not likely to lose their high credit this year, if Mr. Allen's may be taken as a sample.

SMUT.—Mr. Greene, in the Southern Planter, states that intending to sow a small quantity of wheat as an experiment, he soaked it in brine for twenty-four hours, but being called away, he found on his return that his man had commenced sowing without liming, as intended. He was stopped, and the remainder rolled in dry, air slacked lime. Of the wheat from seed not limed, nearly a fourth of the heads were *smut;* of the remainder, not a head.

BOMMER'S MANURE.—Mr. Greene, before seeing Mr. Bommer's statement in the Cultivator, had purchased, and applied that method to the preparation of tan bark, and he has no doubt the compost will be excellent. He thinks the method excellent for converting weeds, straw, cornstalks, &c. into manure, but advises the operator to commence where he can have convenient access to water, as considerable quantities will be required in the preparation.

WORTHY OF NOTICE.—"In woman we find that any thing which tends to annoy her, to irritate feelings, or produce an exhibition of anger, occasions at the same time a partial destruction of the valuable constituents of her milk. We have it in our power to observe these effects in woman, with more accuracy than in the lower animals, though doubtless similar feelings will produce in both the same change in the composition of the milk. The milk of a woman who has experienced a violent and sudden fit of anger, is found to be quite sour; hence it is requisite that wet nurses should be kept in a state of perfect tranquility, both in mind and in body.

"For a similar reason it is necessary in dairy farming to use every means to insure the tranquility of our milch cows. Harsh treatment exerts a very injurious action on the nature of the milk, both from mental and physical causes. Dairymen are well aware of the evil results which follow, if cows be harrassed either by dogs or harsh keepers."—[*Playfair's application of Physiology.*

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AGRICULTURAL INSTITUTE, BRIDGEPORT, CT.

THE REV. B. G. NOBLE intends to commence an Agricultural Institute on his farm in the town of Bridgeport, on the first Wednesday of October. The system of education will be adapted to the wants of youth designed for the pursuits of agriculture. It will include the natural sciences, in their connection with agriculture, and all the higher branches of an English education.

The winter term will commence on the first Wednesday of October, and the summer term on the first Wednesday of May, and will each continue 22 weeks.

Expenses for board, tuition, washing and fuel, for a term, $80. Payments quarterly, or for the term, in advance. If not provided by the pupil, there will be a small charge for bed and bedding.

Only ten pupils can at present be accommodated. Application to be made to Rev. B. G. Noble, Bridgeport, Conn.

Bridgeport, August 15, 1843.—2t.

TO INVENTORS AND OTHERS.

DRAWINGS, Specifications, and other papers requisite for procuring Patents, prepared by the subscribers upon moderate terms, and transmitted to Washington, free of expense.

Mechanical, Architectural, and other drawings, calculations for machinery, maps, &c., also made upon the most reasonable terms, by A. & W. S. ELLISON, Civil Engineers and Draftsmen, Nos. 13 & 16 Douw's Buildings.

SURVEYING.—A. & W. S. E. still continue to make surveys of Farms, Water Powers, &c.

Albany, Sept. 1, 1843.—tf.

PLATT'S PATENT PREMIUM PORTABLE MILL

For Grinding all kinds of Grain, Spices, Drugs, Paints, &c.

THE subscribers have been recently appointed general agents for the sale of the above most valuable mills in the state of New-York; also for the sale of patent rights in the patent. Price of 12 inch machine, $40; of 15 inch, $60; of 18 inch, $100; of 24 inch, $110, payment to be made on delivery.

All orders—post paid, if by letter—will be punctually attended to. Samples of the mill may be seen at their office.

3t. L. BOSTWICK & CO., 58 Water-st., New-York.

A GREAT SALE OF LONG WOOLED SHEEP.

THE subscriber having become the owner of the celebrated flock of New Leicester and Cotswold breeds of Sheep, of Thomas Dunn, containing near two hundred head; all thorough bred, having been crossed for the last twenty years by annual importations from the most celebrated breeders in England, at a very great expense, which has given them a great size and a strong hardy constitution; their fleeces averaging about 7 lbs. per head. For several years past, fat wethers have been sold to the butchers in this city, weighing from 40 to 50 lbs. the quarter, from this flock. The subscriber being in ill health, and desirous of closing up his business, will dispose of them at public auction, on the 4th day of October next, at the farm recently owned by Thomas Dunn, 14 miles west of Albany. An opportunity like the present, may never occur again to those wishing to make a fine selection and to improve their flocks.

Albany, Sept. 1, 1843.—2t. GEORGE MONTEATH.

MT. HOPE BOTANIC GARDEN AND NURSERY.
ROCHESTER, N. Y.

THE proprietors of this establishment offer for sale an unusually fine assortment of Fruit Trees, comprising the choicest varieties of Apple, Pear, Peach, Plum, Cherry, &c. now cultivated.

The trees are of good size, exceedingly thrifty, and free from diseases of any kind. The stock of Cherry and Peach particularly is very large and of beautiful growth.

They have also on hand an excellent stock of *Ornamental Trees and Shrubs, Green House Plants, Bulbous Roots, Double Dahlias and Roses.*

The latter embraces the most desirable new varieties of the *monthly* Bengal, Tea scented, Bourbon and Noisette, and of the *hardy* Province, Damask, Moss, Hybrid, China, &c., and of the magnificent climbing varieties of Ayrshire, Boussault and Rubifolia, including the splendid new *Double Michigan.*

The proprietors pledge themselves to execute all orders they may be favored with in the most satisfactory manner. The utmost care is taken to have every parcel that leaves the nursery properly packed and shipped.

Catalogues will be forwarded, gratis, to all applicants, and may also be had at the office of the Cultivator in Albany, and the New Genesee Farmer in Rochester, and at the several agencies of the Rochester Seed Store in the country.

It is particularly requested that all orders be forwarded as early as possible, (say before 10th October,) so that they may be executed as soon as the season will admit.

A remittance or satisfactory reference is invariably required.

Address, post paid, ELLWANGER & BARRY,
Sept. 1, 1843.—2t. Rochester, N. Y.

SALE OF DURHAM SHORT HORN CATTLE AND SOUTH DOWN SHEEP.

THE subscriber, desirous of reducing his stock, will offer for sale, at auction, on Wednesday, the 13th of September next, at 10 o'clock, A. M. at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers and calves, and between 70 and 80 head of South Down sheep, consisting of bucks, breeding ewes, yearlings and lambs, bred from the stock imported by Mr. Hawes in 1832, and from bucks imported since.

Messrs. Corning & Sotham, will also offer at the same time and place, some of their celebrated HEREFORD BULLS, of different ages. C. N. BEMENT.

Three Hills Farm, Albany, June 1, 1843. 4t.

POUDRETTE.

CHEAPER STILL—Seven barrels for $10, and eleven barrels for $15, for this fall's use on Wheat and Rye—in order to show its great value for those crops. Orders will be executed immediately on receipt of letter, or personal application with the money, to D. K. MINOR,
Aug. 1, 1843.—3t. 23 Chambers st., New-York.

VALUABLE FARM FOR SALE.

THE valuable and highly cultivated farm now occupied by Mr. Earl Stimson, in the town of Galway, Saratoga county, containing about 325 acres, will be sold at public auction, by virtue of a decree of the Court of Chancery, at the Court House in the village of Ballston Spa, on Saturday, the ninth day of September next, at twelve o'clock at noon. This farm is so well known to agriculturists, that it is unnecessary to describe it more particularly. The property is so situated that it will make three good farms, and will be sold together, or in parcels, to suit purchasers. The sale will be absolute to the highest bidder, on the ninth of September, and a large portion of the purchase money may remain on mortgage if desired. For further particulars apply to Samuel W. Jones, Esq. Schenectady, or to the subscriber, No. 75 Nassau street, New-York.

July 19, 1843.—2t. J. OAKLEY.

JUST PUBLISHED—PRICE 31¼ CENTS.

LECTURES on the Applications of Chemistry and Geology to Agriculture, by Jas. F. W. Johnston, M. A., F. R. S. &c. Part III. On Manures—their nature, composition, and mode of action, and their best application to improve the soil, For sale by D. K. MINOR, 23 Chambers st., corner Centre st., New-York, also at the office of "*The Cultivator,*" Albany, and by Booksellers and News Agents generally. Price 31¼ cents.

Parts I. and II., reprinted from the author's second edition, will be ready early in August. Part IV. will be published within one week after its receipt from London.

NOTICES OF THE WORK.

"The most complete account of Agricultural Chemistry we possess."—*Royal Ag. Journal.*

"Nothing hitherto published has at all equaled it, both as regards true science and sound common sense."—*Quarterly Journal of Agriculture.*

"By their easy style are likely to prove interesting to the least instructed.****When finished, this book will form the only complete treatise on the whole subject to be found in any language."—*Blackwood's Magazine.* *Aug.* 1.—3t.

TO FARMERS.

THE subscriber is prepared to supply Compound Guano, prepared from an analysis of that valuable manure. Also, dry Sulphate of Soda, Sulphate of Ammonia, &c. He has 5,000 to 10,000 bushels of Hard Wood Charcoal, which he will sell at 4 cents per bushel. Estimates will be given for any description of Chemical Manures that may be required. Engaged in chemical manufacturing for thirty years, he feels confident of giving satisfaction to those who may favor him with their orders. All letters asking information must be post paid.

JOHN BARLING, foot Jane-street, Greenwich.
New-York, April 28, 1843.—6t

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

MONTHLY NOTICES.

COMMUNICATIONS have come to hand since our last, from A. B. N., of Nashua, G****, A. F., Solon Robinson, R. Rubblee, Alonzo Sessions, Will. H. Wills, J. T. Leigh, D. H. Wright, C. Butler, John W. Smith, T. D. C., Peregrinator, John Delano, A. J. Downing, E. D. Worbasse, A Farmer, Geo. Bommer, T. M. Niven, A Practical Farmer, M. E. Merwin, B. A. R., Yankee Farmer, P., J. King, G. Kouwenhoven.

☞ Our absence at Rochester, for ten days past, has prevented attention to several private letters, and answers to many inquiries. They shall be attended to next month.

☞ The articles alluded to in the private note of *A Practical Farmer*, will be very acceptable, as is every thing from the same source.

☞ We should have been glad to have given place to Mr. Bommer's communication this month, had it been possible. It was not received till after our return from the Fair, when our paper was more than filled. It shall be given in our next.

☞ Mr. *S. Williams* will find in the nos. of the current vol. of the Cultivator sent him, the information he asks in relation to pressing the juice from cornstalks.

J. M. H.—The engravings would cost from $10 to $12.

☞ *Lansingville, S. A. Steele, Wm. Dicken*, and several others, should each have paid the postage of their letters. We are ever ready to answer inquiries or attend to commissions for our friends, when in our power, but we do not like to pay $18¾ or 25 cents for the privilege.

☞ The *Pictorial Times* and *Illustrated London News*, containing descriptions of the Fair of the Royal Ag. Society at Derby, were sent from this office to several of our exchange papers, and we suspect the South. Planter and the S. W. Farmer, are indebted to us for the papers they have acknowledged from another source. Certain it is, we sent them copies of the papers mentioned.

SHEDDING OF HORNS IN CATTLE.—By the remark respecting cattle shedding their horns at the age of two or three years, in the Aug. no. of the Cultivator, and which is referred to by "A Saratoga Farmer," it is not intended to convey the idea that the horn falls off as in the case of the deer, but that it is loosened from its base so as to allow a lengthening of the bone of the horn, as without this process growth would be difficult, if not impossible. It is to this annual starting of the horny covering of the bone of the horn, that the annular rings are owing, by which the age of the animal is computed, allowing two or three years previous to the first ring.

OLD ONONDAGA FOREVER!—Our obliging host of the far-famed Syracuse House, is about to become as celebrated for his success in farming, as for his superb accommodations for the traveler. His unrivaled ox, and his splendid porkers, have elicited the admiration of thousands, and when we learned that his wheat crop this year was 48 bushels per acre, we began to think he had distanced competition in this respect also; but it seems that Mr. Dickinson, of "Sunny" (or Onondaga,) "Hollow," has carried off the palm, by producing from an acre, 52 bushels, 8 qts. of wheat. Verily this does not look like a material falling off in the wheat crop. We wait to see what county beats Old Onondaga.

ACKNOWLEDGMENTS.—We tender our kindest thanks to the several friends to whom we are indebted for the various articles alluded to in our "Acknowledgments," from month to month. Since our last, we have received

"*The Horse, by Wm. Youatt.*" American edition, edited by J. S. SKINNER, Esq. From Lea & Blanchard, publishers, Philadelphia.

The American Agriculturist s Almanac, by A. B. ALLEN, from J. Winchester, New-York. It is got up in good taste, and is well worth the shilling charged for it.

Manures, a Prize Essay, by S. L. DANA, published by the Mass. Society for the Promotion of Agriculture—from the Author.

Address before the New-Haven Hort. Society, by A. S. MUNSON, M. D., together with the Transactions of the Society for 1842—from N. Darling, Esq. [Mr. D.'s note, though dated Aug. 17, was but recently received. We shall be glad to receive the paper alluded to. Send it by mail.]

The London *Farmer's Journal, Mark Lane Express*, and *Farmer's Herald*, in regular files, from their respective Editors.

"*The Farmer's Mine or Source of Wealth*, by HENRY HEERMANCE—Revised and corrected by A. B. ALLEN, editor of the American Agriculturist."—From the Author. [We presume this must be a good book—indeed, we are quite sure it is, unless the compiler or revisor has so badly mangled several excellent papers, as to render them valueless. For instance, the *first chapter* is *copied* verbatim, from the Prize Essay by one of the Editors of the Cultivator, and without even the poor acknowledgment of quotation marks. In the other chapters, page after page is given from the same Essay, sometimes with acknowledgment, but more frequently without. The other parts are made up from two or three other standard works, with an occasional acknowledgment of the sources from whence derived. Taken together, it is as gross a piece of plagiarism as we have ever seen. The revisor's part seems to have consisted in the introduction in several places, of references to the American Agriculturist. We have not, however, carefully compared the portions taken from our Essay, to see what "*corrections*" have been made.]

☞ We have the pleasure of acknowledging the receipt of a box containing two pair of those fine birds, the *Dorking Fowl*, from our friend L. F. ALLEN, Esq. of Buffalo. The Dorkings are famed for their size and egg producing properties, and those forwarded gave good evidence as to this latter quality. Western New-York is certainly much indebted to Mr. Allen for his efforts at introducing and improving the best animals generally.

THE FARMER'S ENCYCLOPEDIA.—The nos. of this work are regularly issued by Messrs. Carey & Harl, Philadelphia. The article on the "Effects of Climate," in this work, alluded to by our correspondent, J. T. LEIGH, Esq., and which has been so severely handled by our friend Phillips, in the S. W. Farmer, was not written for the Encyclopedia, but copied from Featherstonhaugh's Journal of Geology for 1831. We venture to presume that it was introduced without a proper examination of its statements, as we cannot believe the editor would intentionally have done injustice to the productions of the South.

BLACKWOOD'S MAGAZINE.—The cheap re-print of this work for Sept., has been promptly furnished us by the publisher, J. Winchester, New World Office, New-York, who has nearly ready for the press an abridged edition of Allison's History of Europe, to be published at the low price of $1,00.

PRINCE'S Descriptive Catalogue of Fruit and Ornamental Trees, &c. cultivated at the Linnean Botanic Garden, Flushing, has been received. It will materially aid the purchaser in making his selection.

RIP VAN WINKLE PEAR.—We received about the first of las month, a box of this fruit, from Mr. C. HAMILTON, Canterbury, Orange co., from the tree noticed in our Aug. no. It is a very fair quality, and worthy of being introduced into our collections of this fruit.

THE AMERICAN RAIL ROAD JOURNAL.—Our old friend MINOR, formerly of the New-York Farmer, has resumed the editorship of this work. Among the interesting papers in the July no. is a very interesting account of a visit to the extensive iron works of H. Burden, Esq., near Troy.

CHATTERLY'S REPORT ON AGRICULTURAL EXPERIMENTS.—We acknowledge the receipt from our London correspondent, of a sheet containing the result of a series of experiments made with various substances, on different crops, from which it appears that *sulphate of ammonia* was the most active of these substances, increasing the product in the same kind of soil, from 23¾ bushels of wheat per acre, where none was used, to 32¾ bushels, where 1¼ cwt. per acre was used.

THE SOUTH.—We make the following extract from a private letter of a correspondent in Maryland:—"Your remarks in regard to Dr. Cloud's improved culture of cotton, do you much credit, and I am truly pleased to know that your subscription list is increasing southward. There is no section of our country requires your indefatigable aid more than the south, and I hope to see the day when their agriculture will be improved. From my little experience there, I believe that larger crops can be made than Dr. Cloud's. The very best land I ever looked upon, being a vegetable deposit with sand and clay, and based upon a secondary formation of lime, only produced about 25 bushels of corn to the acre, and ought to grow over 100 with less labor. The corn was planted about 5 feet square, one stalk in the hill, and they were obliged to work it till earing, or the weeds would have smothed it. My astonishment was that they made any corn."

SOLON ROBINSON.—We regret to learn that this efficient and zealous advocate of every measure calculated to improve the character and elevate the standing of the cultivators of the soil, has been removed from the office of postmaster. Holding the pen of a ready writer, and enjoying the franking privilege, Mr. R. has for years past, done much by his private correspondence, as well as by his communications to the Agricultural Journals, to promote the great object in which he has been so zealously engaged. Having lost the franking privilege, his labors must of necessity be somewhat curtailed, as few men can be expected to maintain so extensive a correspondence as he has heretofore done, when the postage on each letter costs nearly a bushel of wheat. Hereafter, we beg him not to pay postage on his letters to the Cultivator; and we second the motion of our friend PHILLIPS of the Southwestern Farmer, by entering the name of SOLON ROBINSON, as a permanent FREE subscriber to the Cultivator.

SOUTH DOWNS.—We call the attention of all amateurs and breeders of fine stock, to the notice of Mr. ROTCH'S sale in another part of this number. The sheep are of the best breeds, selected or bred with great care, and will be found great acquisitions to all who are desirous of placing on their farms some of the best South Downs in the country. The great experience and skill of Mr. R. in the selection and breeding of stock, are sufficient guarantees of the excellence of the animals offered.

Business of an important nature calls Mr. R. to England for the next two or three years, and he will spend a large portion of them in a survey of the agriculture of that and the other portions of Europe, and a thorough examination of their several breeds of improved and other animals; a labor for which he is admirably qualified, and of which the results can scarcely fail of being valuable and important. He will carry with him the best wishes of thousands for his success while abroad, and a safe and speedy return to our American shores.

☞ WE invite particular attention to the advertisement of THOMAS & SMITH, in this number of the Cultivator. Their Nursery, though recently commenced, occupies more than ten acres in compact cultivation, and they have already in fitness for sale, a supply of some of our best fruits. Among these are a fine collection of peaches of more than 10,000 trees of large size and excellent growth. But that which we wish more especially to commend, is the rule which they have laid down as the basis of all their operations; to offer nothing for sale but proved varieties, which they have themselves examined while in a bearing state, and whose excellence and fitness for the climate has been rigidly tested by direct experiment. Though they have availed themselves of an extensive collection of fruit, only a few of the very best are selected for propagation and sale, and the confusion and frequent mistakes arising from a numerous list of kinds is avoided. They have made great efforts in collecting the best fruits from all parts of the Union, and these as they come into bearing are submitted to thorough examination, and those which on strict trial are proved fully worthy, are cultivated for public use.

PROFITS OF A GOOD COW.—We find in the S. C. Register of Agriculture, the following statement of a cow owned by him, for the last 2 years and 3 months. In that time she has given milk for 672 days, and at least eight quarts per day. Milk sells at Columbia, for 12½ cents per quart, and the milk would thus be worth $672. Two calves were sold for 17 dollars, giving a total profit of $689. The expenses were cost of the cow, $11; interest, $1.73; Servant's time milking, $54; food, stabling, &c. at $45 per year, $100. Whole expense, $166.73; leaving a profit of $522.73, or about $196 per year. Putting the milk at the common price at the north, 6 cents, and the profits are still great. The cow is small, and of the native breed. Who would not keep a good cow?

CATTLE SHOW AND FAIR

OF THE

N. Y. STATE AGRICULTURAL SOCIETY FOR 1843.

The three days of the State Agricultural Cattle Show and Fair, held the present year at Rochester, have been great days for the State of New-York, and Western New-York in particular. With scarcely an exception, every thing passed off in the very best manner; great harmony of feeling, increased zeal in the great cause of agriculture, and the best spirit among all classes assembled to witness the proceedings, characterized the meeting.

The measures and arrangements adopted by the Executive Committee, founded on the experience of the past, were such as to materially contribute to this result; and for the carrying out of these arrangements, too much credit cannot be awarded to the able and indefatigable President of the Society, under whose personal supervision they were mostly conducted. The farmers of New-York have done themselves honor by the splendid exhibition they have thus created, and the public spirited citizens of Rochester have shown even more than their wonted liberality and zeal in every good work, in the promptness and extent with which they responded to the call which the location of the Fair at that place rendered necessary. Filled to overflowing as was the city, by the multitudes that poured in from every point of the compass, and by every means of conveyance, to witness this great annual Farmer's Festival, the public hotels were found utterly unable to accommodate all, and private mansions were freely opened, and a generous hospitality abundantly exhibited.

The milk and honey of Palestine had, in the earliest ages, passed into a proverb, and the wheat and flour of the Genesee Valley, promises to become not much less celebrated. Of this, the massive structures which, under the name of flouring mills, line both sides of the Genesee river in its rapid transit through the city, and which are capable of turning out from five to six thousand barrels of flour daily, as well as the great breadth of wheat seeded yearly in the district, and the beautiful specimens of grain shown at the Fair, furnish the most ample evidence.

The grounds occupied by the Society for their exhibition, were well located on the west side of State street, about a mile from the central part of the city, and if not in quite as picturesque a situation as those occupied at Albany last year were, they were not wanting in interest in this respect. The deep chasm through which the Genesee rushes, after having made the first great pitch of about 100 feet at the city, lay immediately below on the left, and the roar of the falls mingled its cadence with the neighing of the horses, the bellowing of the cattle, and the rattle of the carriages.

About ten acres were enclosed with a close and substantial board fence about ten feet in height, with suitable gates for the ingress and egress of carriages, animals, &c., and from those not members of the Society, invited guests or strangers of distinction, an entrance fee of 12½ cents was demanded at the gate. The experience of last year was strongly in favor of this most reasonable mode of defraying the necessary expenses of the Society, and the result this year would seem to be decisive. It affords the flattering prospect that the Society may hereafter enlarge its sphere of operations, or its list of premiums, and safely rely on the liberality and spirit of the public for support.

The rush of the citizen farmers, mechanics and others, to attend the Fair, was unprecedented and astonishing; and the interest, to the last, appeared scarcely to be abated. Canal boats and trains of cars poured in their thousands daily, and the manner in which the streets of Rochester were blockaded, indicated that every wheel vehicle within 50 miles of Rochester, had by some magician's wand been at once congregated in the place. The number of distinguished gentlemen present from all parts of the country, was greater than at any former meeting of the Society, and the appearance and the interest taken by such men in the cause of agriculture, added much to the general influence of the meeting. Of these gentlemen we have only room to mention ex-President Van Buren, Gov. Bouck, ex-Gov. Seward, Mr. Webster, Mr. Allston from S. Carolina, Mr. Ferguson from Canada, Mr. Gowan of Pa., &c. &c.

The number of animals, and articles of domestic manufacture, on the ground for exhibition or competition, was great, as the reports of the several committees will show, much exceeding in that respect, public expectation generally.

Cattle.—The show of *Short Horns* was not, on the whole, equal to that of last year, the owners of the fine herds at the east, which are easily centered at Albany, not exhibiting at all, thus leaving the premiums open to the competition of the west, and nobly did the west sustain its high reputation for fine cattle, as all who had the pleasure of looking over the grounds can testify. Few were aware that Western New-York could produce so many fine specimens of improved Short Horns as were on the ground, yet the number present might have been greatly increased. The fine stock of Messrs. Sherwood of Auburn, Allen of Buffalo, Wadsworth, Hathaway, Remsen, Newbold, LeRoy, &c., attracted much notice, but among this class of animals, few were as much admired as the splendid calf of Mr. Crosby, of which a figure was given in the number of the Cultivator for September, 1843. These beautiful animals have lost none of the favor with which they were viewed by the public, and as long as their superior symmetry and other valuable properties are so marked, there is little danger to apprehend such a result.

In the show of *Devons*, we think we have never had any thing in the state to compare with it. We can only mention the beautiful animals shown by Messrs. Garbutt, Beck, and L. F. Allen; among those of the latter being of his purchase from Maryland, two heifers and a bull, and finer animals than these we have rarely had the good fortune to look upon. With us, the Devons have been one of the favorite breeds of cattle, and we think an examination of such animals would do away some of the prejudices that may have existed against them. If in weight, early maturity, and milking properties, essential points all admit, the Short Horns exceed them; in adaptation to labor, color, and we think in the quality of the beef, the advantage is on the side of the Devon. It is the general infusion of this blood, which enables New England to bring forth those thousands of pairs of beautiful red working cattle, which constitute one of the most attractive features of their agricultural exhibitions, and of which they are, and well may be pardonably proud.

The beautiful and extensive herd of *Herefords*, owned by Messrs. Corning & Sotham of this city, which attracted so much attention at the last Fair, were much missed, and we hope another such occasion will not be allowed to pass without the presence of at least a portion of them.

Some very fine *Grade animals* were on the ground, particularly a steer from the herd of L. F. Allen, and a bull owned by Mr. Brooks of Avon. This last was a cross of the Durham and Devon, and retained many of the good qualities of both, as his appearance and handling plainly indicated.

It is a matter of regret that so few of our *Native Cattle*, working oxen, and excellent cows, are brought forward by farmers for exhibition at our Fairs. We hope the fashionable slang of "scrubs" and "dunghills," so liberally applied by a few individuals to all animals of this class, has not frightened, and will not dishearten them from exhibiting their best specimens, either for competition or comparison, whenever an opportunity offers. There is a fault in this matter that must be remedied. Comparing animals is one of the surest methods of showing where improvement is needed; and bringing our native stock with grade cattle into contact with the fine improved, will demonstrate to all the necessity and the benefit of crosses in the breeding of animals. There was but one native cow offered for exhibition and premium, and she was well worthy of the distinction, her owner, G. A. Mason, Esq. of Jordan, Onondaga co., having made from her milk in one month, *sixty-seven* pounds of butter.

If those who deal in *Fat Cattle*, must of necessity themselves be fat, there should be some very fat men in the Genesee country. Some ten or twelve head were exhibited in this class, and their mammoth size, beautiful symmetry, and fine proportions attracted general admiration. Beef eaters reveled in anticipation of rich sirloins and broad steaks, while the Grahamite secretly repudiated sawdust bread and meatless bones. The valley of the Connecticut has long carried off the prizes or the palm, in the production of fat oxen, but the farmers of that region must look to it, or their laurels may wither before the cattle fed on the far-famed meadows of the Genesee.

In *Working Cattle*, the exhibition was very gratifying. The challenge of Livingston co. for a sweepstakes of ten yoke of cattle to a county, was not responded to by any of the neighboring ones; but there were, in addition to these from Livingston, a great number of beautiful oxen from Monroe and other counties, showing what the farmers in the Genesee country might do, should they see fit to forsake the culture of wheat for that of cattle. Many of the cattle shown, would have been an honor to any exhibition of stock, and we hope that in every succeeding Fair of the State, a similar improvement in the numbers and quality of the working oxen may be manifested.

Among the working oxen there was one pair which attracted much notice, but which the committee considered as excluded from competition, by being too fat. They were owned by Mr. Root of York, Livingston co., twins, of a fine red color, and truly splendid animals in every respect. That they were not too fat to work, the owner demonstrated at the plowing match, by doing his allotment in as short a time as almost any one, and in the best manner. It appeared also that they had performed work more or less nearly every day of the season.

The entries of Cattle for exhibition, were as follows: Bulls over 3 years old, 25—Two years old, 9—Yearlings, 12—Calves, 9—Cows, 23—Two year old Heifers, 19—Yearlings, 23—Calves, 10—Grade Cattle, 15—Native, 4—Working Oxen, 40—Steers, 30—Fat Cattle, 8. Total, 227.

Horses.—In the display of fine horses, the exhibition of the present year far exceeded that of 1842. It was good both in numbers and in the general excellence of the animals brought forward. The Morgan horse owned by Dr. May of Palmyra, attracted no little notice, and we think must be considered a great acquisition to the farming community of the Genesee. The activity and sprightly vigor of the well known horse Bassora, now twenty-six years of age, elicited much remark. It may well be doubted whether any district in our country can produce a better collection of colts intended to form horses for agricultural purposes, than those exhibited at Rochester. The farmers of the wheat growing districts of New-York, may well be proud of many of their horses, and should feel the necessity of bringing them all to the same elevated standard, for in no region are more or better horses required, than in a wheat producing one. The matched horses presented for competition, exhibited nothing remarkable, and could not rank among the best specimens of this noble animal.

Number of Horses entered:—Stallions, 47—Mares and Colts, 71—Matched Horses, 22. Total, 140.

Sheep.—In sheep, we do not think the present Show has reached that of the last year, at Albany. There were some very fine ones on the ground, but the number was comparatively small; enough, however, to show what improvements may be made in this animal, and the wide difference existing between the close, compact wool of the Merino, the silken texture of the Saxon, and the long, open fleece of the Bakewell or Leicestershire. The animals that appeared to attract the most attention were some fat ewes owned by Mr. Caward of Ontario county, and a yearling buck, with a few lambs of the Paular Merino, shown by Mr. Jewett of Vermont. The South Downs shown by Messrs. Sherwood and Parsons were much admired, and were fine specimens of that variety. It was a subject of regret that a flock of some 30 or 40 pure blood Merinos bred by Mr. Sanford, Vermont, from animals selected from the stock of Mr. Jarvis, and known as the Consul stock, and intended for the state exhibition, should have been so delayed in their transportation as to render it impossible to reach Rochester in season. From the well known character and qualities of those sheep, they could scarcely have failed of being an acquisition to the district, as well as have formed an object of attraction to thousands of farmers at the Fair.

Whole number of sheep entered, 110.

Swine.—The specimens of swine exhibited were not numerous, being less than fifty, but were in general of very good quality, and fair representatives of the several breeds shown. There were some sows with most interesting families of pigs with them, and one or two of these, belonging to the white Leicester, attracted much notice. Some beautiful Berkshires were on the ground, and their fine forms, in connection with their well known good qualities, elicited much admiration.

Domestic Manufactures.—Some very fine specimens of domestic manufactures were exhibited. Blankets, flannels, cloths, carpets, &c. &c. were shown in great numbers, and reflected great honor upon the individuals whose labor had produced them. This is the domestic industry that should be encouraged, and we cannot but think there are many women who would be far better employed in spinning wool and making tow cloth, than in spinning street yarn and reading novels.

The vast variety of minor articles of domestic manufacture entered for exhibition, will be best understood when we state, that of butter, 9 specimens; cheese, 11; maple sugar, (in samples of 50 lbs. or more,) 4; cocoons, 21; reeled silk, 9; manufactured silk, 25; flannels, 6; linen diaper, 5, were entered on the books for premiums, and a countless number of carpets, hearth rugs, &c. &c. There was but one specimen of cornstalk syrup and sugar offered for exhibition. This was made by Mr. Adams of Ogden. The syrup was of good quality, and had much the appearance of ordinary cane syrup or molasses. The sugar was rather darker colored than the Muscovado, owing doubtless to its imperfect draining. The crystalization was good, and the sample such as to afford not only proof that sugar may be made from the cornstalk, but encouragement in the manufacture. The great difficulties to be encountered, are in the rapidity with which the processes, when begun, must be completed, or crystalization will not take place. Experience and skill will overcome these, and the manufacture of corn sugar will, unless we are much mistaken, become an extensive business in many parts of our country.

Agricultural Implements.—Of agricultural implements there was a great number, and in general well executed. Of plows, there were some 35 or 40 kinds on the ground; among which, we saw some of the fine Worcester or Ruggles & Mason's plows, from that useful establishment, the seed and implement store of B. F. Smith, Esq., Syracuse. We were pleased also to see that Mr. S. had upon the ground a subsoil plow, as well as quite a number of other agricultural implements, such as spades, hoes, hay knives, &c., all of the first quality. The portable mill, of which a figure and description were given in the September number of the Cultivator, was also on the ground, and excited much notice and admiration for the rapidity and excellence of its work. It can scarcely fail of coming into general use among farmers who understand the benefit of having their grain ground before it is fed to their animals. The clover mill of Mr. Burrill of Geneva, was also much noticed. A number of horse powers for working threshing machines were exhibited, and some machines were tested on the ground. The work appeared excellent, and performed the threshing with ease and perfectness. A variety of harrows, wood and iron framed, were shown; but in our opinion, there are none which combine more advantages than the one invented and figured by Mr. Geddes, in a former volume of the Cultivator, especially in its present improved form. A new implement, called by the maker the "*Gang plow,*" excited much attention from its novelty and the neatness of its structure. It consists of a square frame work, with four light plow shares attached, with a neap to which the horses are fixed, and rollers to regulate the depth of the implement. It could scarcely fail, in clean soils, to be a most capital implement for covering seed wheat, as in many cases wheat does better after the plow than the harrow, if the plow could be prevented from covering too deep, a serious evil in most instances.

In the HORTICULTURAL DEPARTMENT, particularly in that of fruits, the exhibition was truly splendid, and will go far towards confirming the impression that for all our ordinary cultivated fruits, the vicinity of Rochester is one of the first in the world. The vegetables were, on the whole, good, but had the season not been so uncommonly dry, better ones would doubtless have been on the tables of the exhibition. Beautiful melons met the eye on every hand; and one pronounced by the grower, Mr. S. of Gates, to be the only one of its kind in the world, (it being a species of hybrid, formed by a cross impregnation of the Minorca with the green flesh southern melon,) we had the pleasure of tasting, and can truly say that in our opinion, its flavor has rarely if ever been excelled. The assortment of green house plants was very fine; and although the assemblage of flowers was not great, the skill shown by Mr. King of Rochester, in weaving a quantity of them into a beautiful representation of the American eagle, occupying a central position in the long range of tables, was much admired.

Gen. Harmon of Wheatland, the Le Couteur of America, presented some 13 or 14 samples of wheat most of which he has tested by cultivation. He also presented specimens of about a dozen varieties in the head, and samples of smut and chess, also in the head. His wheat is most beautiful, the "Improved White Flint" particularly, and we trust he will allow nothing to prevent his progress in the career of improving this important grain, upon which it is evident he has just entered. He exhibited specimens of a new variety, a fine looking wheat, the heads slightly bearded, and as he stated, the product of a cross fertilization of the "Improved White Flint," his favorite variety, with the White Province, a variety lately introduced from France. Should the new variety prove as valuable as it promises, it should in courtesy be termed the Harmon wheat.

THE DINNER.

According to the plan of arrangements adopted by the Executive Committee, the Agricultural Dinner was to come off on the afternoon of the 21st. The time fixed upon was 7 o'clock, and the place, the Railroad Depot near the river. This immense building was separated in two parts, and in the south half, four substantial tables were erected through its whole length, on which plates were laid for 1,000 persons. Contrary to the expectations of all, every ticket was sold in a short time, and hundreds if not thousands disappointed. The arrangements for the feeding part were entrusted to Mr. Carpenter of Stanwix Hall. At 7, the tables were spread, and the depot splendidly illuminated. At a few minutes past 7, the doors were thrown open for the admission of the PRESIDENT of the Society, who escorted Mr. VAN BUREN and the other distinguished gentlemen present. The rush to the tables was tremendous, and the onslaught upon the good things provided by Mr. Carpenter, would have done honor to a band of Missouri hunters. After the dinner had been pretty effectually despatched, the meeting was called to order by Mr. WADSWORTH, who opened the proceedings by a neat and effective address, of which we can only give a brief outline from the hurried notes taken at the time.

He congratulated all present on the success which had attended the labors of the State Society. It deserved success: its object and aims were of the highest, noblest kind; it endeavored to render labor honorable, and cultivation effective. It demanded and deserved universal confidence and cordial co-operation. Science had been pressed into the service of every other pursuit, while agriculture had been permitted to remain overshadowed with darkness, dense as that of the middle ages. It had remained for the present age to unite skill and science in a great effort to render agricultural labor as successful as it was useful.

For years past, the farmer had suffered from an unnatural condition of things. The currency had been at times expanded to a ruinous extent, and then as suddenly contracted, and we were but just beginning to recover from the disastrous effects thus occasioned. The national character had been injured, and it belonged to the farmer to aid effectively in its renovation. National faith and national honor must be placed beyond suspicion.

Mr. Wadsworth spoke a few words on the tariff. He thought the manufacturer had received a disproportionate share of government legislation and attention; that the agricultural interests deserved more attention than had been bestowed. He alluded to the extent of the subject, and said the present was not the proper time to enter upon its discussion. The gentleman from Canada (Mr. Ferguson) had last year expressed, at Albany, the hope that the only field in which this country should meet England, should be the tented field at the Bull's Head. He (Mr. W.) wished to meet her, not on the ocean, but on the plowed field; for so long as by her superior agriculture she raises 40 bushels of wheat to the acre, and we but 15, she will not be an easy nation to beat, though she might be to meet.

In his address at Albany, he alluded, he said, to the election of a Governor from the ranks of the farmer. [He was here interrupted with cheers, mingled with hisses.] Mr. W. forcibly repeated the remark, that it was a matter of pride to the Society that a farmer, able and worthy, had been found to occupy the chair of State, and he regretted that ill health prevented his being then present with them. Mr. W. entered at some length upon a history of the former Presidents; all had retired to their farms, and the influence thus exerted was of the happiest kind. He alluded to Mr. Van Buren, and the pleasure he felt at having that distinguished son of New-York present at the meeting.

After Mr. Wadsworth closed his remarks, Mr. VAN BUREN was loudly called for, and on rising, was received with reiterated cheers.

Mr. VAN BUREN said he should be doing injustice to his own feelings if he withheld an expression of gratitude, first to the men who had invited him to be present at this great holiday of the farmer, and next to those present, for the cordial, sincere and friendly feeling with which his appearance had been greeted. For one purpose, and one only, he rose, and that was to present to that respectable body his unfeigned thanks. He should not attempt to make a speech to those whose object was the prosecution of the useful and the practical, rather than the showy and the ideal. He should not presume to offer practical remarks on agriculture; were it necessary, in him, it would be like carrying coals to Newcastle.

He spoke of the splendid exhibition of the day. His expectations had been high, from the state character of the meeting, and the district in which it took place, and it afforded him pleasure to say that the reality had exceeded his expectations altogether. It was an exhibition of which every American, certainly every New-Yorker, might well be proud. His allusion to the department of domestic industry in the exhibition, as the handiwork of the fair daughters of New-York, was in his most felicitous manner.

Mr. Van Buren then spoke of the pleasure he had taken during the last two years in the management of his farm, and pronounced these two years the happiest of his life. He briefly spoke of his own farm affairs and experiments, with the success attending his efforts at improvement; saying that while his farm of 150 acres formerly barely furnished enough for his use, in the single article of hay alone, it now yielded him a surplus of 80 tons. He spoke of the honorable character of labor, of the necessity of industry, of the value of associated effort, and the excellent influence exerted by such societies in improving and elevating the tiller of the soil.

Mr. Van Buren sat down amid the cheers, cordial and hearty, of the whole assembly.

Judge LELAND of Steuben, one of the Executive Committee, followed in a few remarks on the character of the farmer, the influence he exerts on the affairs of the state and nation, and the consequent necessity of his being well informed, patriotic and independent. He concluded a few pertinent and well directed remarks, by offering the following:—

GOV. BOUCK—It is a credit to the farmers that they have among them a man capable of filling the distinguished office of Governor of this State.

A little before this time, the train from the east, due at 4 o'clock, arrived, and exhibited the singular spectacle of a locomotive and its lengthened train, with its thousand passengers, dashing through the immense dining room usually appropriated to their exclusive use. Three cheers burst spontaneously from the crowd at the novel sight, and three more for Webster, when it was announced that he had arrived.

The President, Mr. W., here arose, and gave—

FRANCIS GRANGER, the favorite son of the Farmers of Western New-York.

Mr. GRANGER rose to reply, amidst reiterated cheers and other tokens of applause. When these had subsided, he said:—

Mr. President and Gentlemen:—The distinguished honor conferred upon me, would seem to demand that I should say something in behalf of western New-York, and yet it would appear scarcely necessary, for when I look around on this vast assemblage, I see you are all here—every man to speak for himself! Well may he who speaks for western New-York feel proud of the duty! I can but feebly express to you the emotions which crowded in my mind, when to-day I took my seat in the cars by the side of the man who raised the *first bushel* of wheat west of Cayuga lake! (Cries of "Who is he?—who is he?" Mr. Granger answered, Abner Barlow, and then three hearty cheers were given for Mr. Barlow by the vast multitude.) Yes—the man in full health and vigor, who sowed the first seed and raised the first crop of wheat in the west! and yet he was even then in the pride and strength of manhood. The world can present no such instance in its history. What is the history of western New-York? It is but as yesterday when it was one vast unbroken forest. When the revolution was over, Yankee industry, Yankee perseverance, would no longer consent to be bound down to the iron coast of New-England or even the high hills of Vermont.

They sought a milder country, which would give a better return to the industry of man—where they could push sooner the advancements of life, and secure earlier its elegancies—the enjoyments of civilization—a broader field for their energies. What has western New-York done? Even in my short day, and short it is, though I am getting a little in the gray of the evening—even in my short day, this city of Rochester was not even a village! When I moved into western New-York, this splendid town, which presents now all the arts of polished life, where the stage proprietor would not even deign to change horses here—he only *watered* and went on, is now a city which *packs* more flour than any other in the world! I repeat it, than any other in the world. I have heard this contradicted, but facts and figures will make manifest its truth, and to them I appeal.

It has been asked, where are the pioneers of western New-York? The grave has closed over most of them, but there are many still living among us to give to their children encouragement and advice—to tell them to "be sure they are right, then go ahead." I have taken by the hand many a man to-day, who thought an eminent land proprietor mad when he told them that the time would come, in their and his day, when the stage would go *twice a week* from Canandaigua to Albany, and yet the little train in which I came over to-day, had only only eleven hundred!

Such is western New-York: its progress and history have solved the doubt which many entertained, whether it was not a problem whether there was sufficient energy in a republican government to push forward and hold up and force forward towns and settlements. What Rochester has done, others in our land also have; Cincinnati in Ohio is a town larger than that famed Odessa, which the whole power of Russia for fifty years has been building up. But I must close. When I arose, I only intended to speak ten words, but I thought I must say one thing in answer to the reference to western New-York.

I will say, if there be a man on earth who, when he sinks to the grave, can do so with thoughts of happiness, it must be the pioneer of western New-York—he who has lived to see, through those fruitful fields where once was the roam of the savage, yonder train pursue its arrowy flight.

Mr. President, I offer you—

The Pioneers of Western New-York—They descended from Pisgah to enjoy the promised land.

Mr. WEBSTER now appeared, amidst the cheers of the multitude, and made a few remarks on the rapid journey he had made for the purpose of meeting on their own soil the farmers of western New-York. Agriculture, he said, was one of the first steps in the civilization of man. He spoke of the advantages of western New-York, its rich soil, and its future prospects, but his fatigue was so great, that he said he must decline at that hour from entering upon such extensive subjects, as he should have the pleasure of meeting them again to-morrow.

Mr. FERGUSON of Canada, followed Mr. Webster in a happy effort, as we should believe from the little it was our good fortune to hear; but the immense crowd had by this time become so perfectly uproarious, that speaking was useless and hearing impossible. Mr. Ferguson closed with the following:—

The health of my honorable and distinguished friend, the President of the State Agricultural Society.

Mr. WADSWORTH made a brief reply; and after a few other toasts, among which was one by Mr. Barlow, the gentleman alluded to by Mr. Granger, the company broke up in most admired disorder. It was manifest at an early hour of the evening, that notwithstanding the great efforts of the President to preserve order, they must, from the great space occupied, and the multitude present, be useless. To attempt a full report of the speeches was useless, and for the sketch given of Mr. Granger's, we are indebted to the editor of the Rochester Democrat, whose position for hearing that gentleman was more favorable than our own.

The 21st was to be devoted to the plowing match, and to hearing the Annual Address from Dr. BEEKMAN of Columbia county, one of the earliest and ablest friends of the State Society, and to the reading of the reports of the several committees.

The plowing match was to come off at 10 o'clock, on the farm of Mr. Pitkin, near the eastern limits of the city. The great number of entries as competitors—26 in all—rendered it necessary to select a larger field, and the trial of skill did not commence until about 11 o'clock. Mr. VAN BUREN, GOV. BOUCK, Mr. WEBSTER, EX-GOV. SEWARD, &c. &c. were on the ground to witness the honorable strife. After all, room could be found for only 18 plows, but these set about their work with a hearty good will, which gave great interest to the whole proceeding. One-fourth of an acre was allotted to each team, with an hour and ten minutes for the performance, reference being had rather to the excellence of the work than the quickness of the time. No drivers were allowed. It was soon evident that the teams as well as the holders of the plows were fully versed in their business. Steady, true and strong, their progress was watched with exciting interest, and so excellent was the work of all, that scarcely two of the thousands of spectators could agree as to the individuals to whom the premiums should be awarded. The work was all beautifully done up within the allotted time, and all agreed that finer specimens of plowing would be found with great difficulty.

As soon as the plowing match had closed, the tide of human beings began again to flow towards the show yards, where preparations had been made for the delivery of the Annual Address. There was a brisk breeze from the west, but the position of the speakers' stand was so well selected, that probably the speakers were better heard than they could have been in any building sufficient to contain but a tithe of the immense crowd, estimated at 20,000, that thronged around the stand. Mr. WADSWORTH, the President of the Society, in a few pertinent remarks, introduced Dr. BEEKMAN to the audience, when he proceeded to deliver an address which was listened to with great interest. As we shall publish it at length at the earliest opportunity, we shall only say that it was admirably written, couched in beautiful language, and full of important truths. He gave a rapid sketch of the origin of the Society, the difficulties it had encountered and surmounted, the establishment of the

Cultivator, the rapid advances of husbandry, as aided by science and art, the present condition of our agriculture, and the probability of its future progress, as new light was cast on the operations of nature, and man was taught successfully to imitate them. His remarks on labor and honest industry were most appropriate; and if there was a man or woman in that vast assembly that had doubted whether a person could labor with their hands and yet remain respectable, they must have had their doubts removed.

When Dr. Beekman concluded his address, the reading of the reports was commenced and a portion of them completed, when during an interval, Gov. SEWARD was loudly called for, and prompt in his response, delivered one of the most happy and spirited addresses of the day. By some it might be considered as trenching on forbidden ground—the passing politics of the day—but his allusions were so brief and in so good temper, as entirely to divest them of any offensive peculiarity, and cause the sentiments to be received with enthusiastic cheering.

The reading of the reports of committees was then resumed and completed, and with the performance of this duty, and the payment of the numerous premiums awarded, the Third Exhibition of the State Agricultural Society, under its present efficient organization, was closed.

On the evening of this day, about 150 gentlemen, principally members of the State Agricultural Society, partook of a dinner prepared by Mr. Carpenter of Stanwix Hall. Hon. DANIEL WEBSTER, GOV. SEWARD, Col. ALSTON of South Carolina, Messrs. GOWAN and ROBERTS of Pennsylvania, Mr. FERGUSON of Canada West, &c. &c. were present. Mr. Van Buren and Gov. Bouck had left the city. Mr. Wadsworth, president of the Society, presided, assisted by Messrs. Beekman, Leland and Nott. After the substantial part of the repast, the president, in some beautiful remarks, alluded to the distinguished services of Mr. Webster, and gave as a toast, "The health of the Farmer of Marshfield." To this, Mr. W. responded in a speech of an hour and twenty minutes. His theme, principally, was the right of agriculture to the protection of government, and the intimate connection existing between agriculture and manufactures. A variety of other speeches were made by gentlemen present, particularly by Messrs. Seward, Alston, Ferguson, Gowan and Morgan. The evening passed pleasantly, and will long be remembered by those who had the happiness of being present.

We should be pleased to add some notices of matters that interested us much at the time, and articles that appeared peculiarly adapted to the wants of our agricultural community, but the limits we have allotted ourselves forbid. We cannot, however, close without congratulating the numerous readers of the Cultivator on the triumphant success of the State Society thus far, and the prospect of its long continued usefulness. Of the interest it has awakened, and the earnest attention with which its progress is viewed, the tens of thousands of farmers and others that crowded Rochester during the Fair, furnish the best evidence. To us, who have known the western district almost from its settlement, the whole proceeding, from the sweeping past lake, river and woodlands in the long trains of cars, to looking on the moving mass assembled on the show ground, seemed more like the work of magic than sober reality. There, by our side, stood the man who had sowed the first bushel of wheat in a country which years ago had acquired the name of the granary of America, and upon that spot had grown up a town second in beauty, wealth and intelligence to few, if any, in the country. Such we thought, at least, as we on our return passed the place in the village of Canandaigua where this veteran pioneer first planted himself.

It has required much time, labor and expense to place the State Agricultural Society in the position it now occupies; it will require labor, attention, and the continued favor of the public to sustain it in the career of usefulness to which we trust it is destined. So long as it confines itself to the duties assigned it—so long as it is the nucleus around which agricultural talent gathers, to better diffuse the knowledge so much needed by the many—so long as it continues the beacon light of the state, to guide, direct and encourage the farmer in all endeavors to improve and better his condition, so long and no longer will it receive or deserve the favor with which it is now looked upon, and the continuance of which is so essential to its usefulness. We can only say in relation to it, that the past is full of experience, and the future full of promise.

Very much of the interest with which the proceedings were viewed, was owing to the great number of distinguished gentleman, farmers and others, from other states, many of whom had appointments on important committees, and the duties of which were arduous, involving the exercise of close attention and sound judgment. How well they performed their duties, the acquiescence. almost without a single murmur from any source, of the competitors for premiums, is the best evidence. For the services so kindly and judiciously rendered, we here return them the thanks of the Society, and the agricultural public of New-York.

RECEIPTS AT THE FAIR.—The subscription papers, list of members, &c, not having been received from Rochester, we are unable to give a statement of the receipts from these different sources this month. The receipts on subscriptions, for memberships, and for admission to the Show grounds, will be given in our next. In the meantime, we may say, that the receipts from all sources amounted to about $3,000, including $328 from the Monroe Ag. Society.

It cannot be amiss to notice here, the great advantages derived by the merchants, traders, mechanics, &c. of those places selected for holding the State Fairs. The immense influx of strangers and others, from the country around, will always leave large sums of money wherever the Fairs are held, and thus promote extensively the interest of all parties. This is becoming yearly more apparent, from the increasing interest felt in the proceedings of the Society, and the consequently greater numbers that attend the exhibition.

On the afternoon of the 22d, we accepted the invitation of the President of the Society, to visit his residence in the Genesee valley, about 28 miles south of Rochester, and in company with several other gentlemen, had a most delightful excursion. The rich valley of that river never appeared to better advantage, and the broad fields from which wheat had been taken, and the extensive ones just seeded, pointed out the great source of wealth in the district. Of this excursion and our visit to the princely farm of the President, we took ample notes, which we intend hereafter to lay before our readers.

LIST OF PREMIUMS,

Awarded at the Rochester Meeting of the N. Y. S. Ag. Soc.

CATTLE.

Bulls.—1st, to L. F. Allen's "Mayduke," Durham, bred by the Hon. Adam Ferguson, Canada West, $20—2d, to J. S. Wadsworth's "Rocket," Durham, $12—3d, to Lorenzo Hathaway's "Welham," Durham, $8—4th, to D. H. & S. Brooks' "Defiance," Durham.

Two Years Old Bulls.—1st, to P. A. Remsen, $15—2d, to N. Chappell, Avon, $10, (both Durhams,)—3d, to E. P. Beck, Sheldon, for his Devon Bull, $5—4th, to Guy Collins, Bloomfield.

Special Premium to C. S. Button, Newark, for his two years old bull "Osceola," $5.

Yearling Bulls.—1st, to C. F. Crosby, Watervliet, for "Osceola," $15—2d, to A. & J. McArthur, Buffalo, $10—3d, to T. H. Newbold, Caledonia, $5, (all Durhams,)—4th, to E. P. Beck, Sheldon, Devon.

Bull Calves.—1st, to J. M. Sherwood, Auburn, for his "Logan," $10—2d, to John Johnston, Fayette, $6—3d, to L. F. Allen, Buffalo, for his "Ben," $4, (all Durhams,)—4th, to L. F. Allen, for his "Rover," Devon.

Cows, Class V.—1st, to J. M. Sherwood, Auburn, for his "Panzy," $20—2d, to John Johnston, $12—3d, to L. F. Allen, $8—4th, R. H. Higham, (all Durhams.]

Heifers, Class VI.—1st, to T. H. Newbold, $12—2d, to Anson Packard, Bristol, $8—3d, to J. M. Sherwood's "Sylph," $5—4th, to L. F. Allen.

Heifers, Class VII.—1st, to J. M. Sherwood's "Phillippine," $10—2d, to L. F. Allen's Devon, $5—3d, to T. H. Newbold's "Isabella."

Heifer Calves.—1st, to Wm. Cook, Lysander, $8—2d, to P. A. Remsen, $5—3d, to L. F. Allen.

Grade Cows, Class IX.—1st, to David Brooks, Avon, $12—2d, to Jehiel Freeman, Geneseo, $9—3d, to George C. Latta, Greece, $6—4th, to Allen Ayrault, Geneseo.

Heifers, Class X.—1st, to E. A LeRoy, Caledonia, $10—2d, to T. H. Newbold, $7—3d, to Anson Packard, $5—4th, to J. R. Murray, Mount Morris.

Heifers, Class XI.—1st and 2d, to Calvin Ward, Richmond, $15—3d, to W. W. Wadsworth, Geneseo.

Native Cows.—1st, to Andrew Snyder, Henrietta, $10—2d, to Wm. Sternberg, Henrietta, $8—3d, to George A. Mason, Jordan, $5.

There were no Native Heifers, Class XIII, exhibited.

Dairy Cows, Class XIV.—1st, to George A. Mason, $15, being the only animal exhibited in this class.

Working Oxen.—1st, to P. A. Remsen, $15—2d, to ——— Stoddard, Onondaga county, $10—3d, to H. Long, York, $5—4th, to Jehiel Freeman.

Three Years Old Steers.—1st, to John P. Root, York, $10—2d, to Allen Ayrault, $5—3d, to ——— Allen, Syracuse.

Two Year Old Steers.—1st, to Allen Ayrault, $8—2d, to John Ayrault, Perinton, $4—3d, to W. W. Wadsworth.

Yearling Steers.—1st, to Roswell Root, York, $8.

Fat Cattle—1st, to Jeremiah Brown, Ridgeway, $20—2d and 3d, to W. A Mills, Mount Morris, $12.

HORSES.

Stallions.—1st, to Henry Paddock, Penfield, and George Fordon, Geneva, for "Alfred," a Cleaveland Bay, imported by Thomas Weddle, $20—2d, to Dr. Wm. May, Palmyra, for "Morgan Tiger," $12—3d, to E. Holloway, Lima, $8—4th, to Alex. Baldridge, Romulus.

Three Years Old Stallions.—1st, to Kinzey Stottle, Chili, $10—2d and 3d premium not awarded.

Breeding Mares and Colts.—1st, to Alex. Baldridge, $20—2d, to Truman Roberts, $12—3d, to Guy Markham, Rush, $8—4th, to Milton Sheldon, Mendon.

Three Years Old Mares.—2d, to J. K. Ballentine, Chili, $5.

Matched Horses.—4th, to J. R. Parker, Rochester. No others awarded.

SHEEP.

Long Wooled Bucks—1st and 3d, to Wm. Swales, Sodus, $15—2d, to Thomas Terry, Mount Morris, $8—4th, to John Battridge, Riga.

Long Wooled Ewes.—1st, to Allen Ayrault, $10—2d, to Luke Chesebro, Auburn, $8—3d, to James Beatty, Greece, $5—4th, to Wm. C. Cornell, Henrietta.

Lambs.—Best pen of 5, to Wm. C. Cornell, $5.

Middle Wooled Bucks.—1st, to J. M. Sherwood, $10—2d, 3d and 4th, to James Parsons, Riga, $13.

Middle Wooled Ewes.—1st, to J. M. Sherwood, $10—2d, Richard Randle, Chili, $8.

Lambs.—Best pen of 5, to J. M. Sherwood, $5.

Saxon Bucks.—1st, to Charles Colt, Geneseo, $10—2d, to Roswell Root and brother, York, $8—3d, to Norman Frisbee, Vernon, $5—4th, to Gideon Cobb, Brighton.

Saxon Ewes.—1st, to Chas. Colt, $10—2d, to Roswell Root and brother, $8—3d to Norman Frisbee, $5.

Lambs.—Best pen of 5, to Roswell Root and brother, $5.

Merino Bucks.—1st, to Edmund Fellows, Chili, $10—2d, to Luke Chesebro, $8.

Fat Sheep.—1st, to George Cayward, Seneca, $10—2d, to T. Norman, $5—3d, Wm. Swailes, Sodus.

SWINE.

Boars.—1st, to H. O. Hills, Vernon, $10—2d, to Daniel Budd, Greece, $8—3d, to S. Tibbits, Pittsford, $5—4th, to N. Hayward, Brighton.

Sows.—1st, to R. L. Allen, Buffalo, $10—2d, to Wm. Wheeler, Rochester, $8—3d, to John Langham, Rochester, $5—4th, to P. A. Smith, Greece.

BUTTER AND CHEESE.

Butter.—To H. Morrison, Orange co., $8—to A. D. Porter, Canandaigua, $5—to D. Wood, West Bloomfield, $5—to Wm. Sternberg, Henrietta, $5—to Isaac Seely, $4—to E. S. Bartlett, Romulus, $3—to D. Pifford, Livingston co., $2.

Cheese.—To T. Burch, Herkimer co., $7—to P. Hathaway, Farmington, $7—to H. Arnold & Son, Hamburg, $6—to Jerome Ives, Jefferson co., $5—to Newberry Bronson, Warsaw, $5—to John Lapham, Farmington, $2.

FARMING IMPLEMENTS.

Threshing Machines.—1st, to Joseph Hall, Rochester, $20—2d, to J. Hale, North Bloomfield, $10—3d, to B. M. Freeborn, New-York.

Horse Rakes.—1st, to L. Swift, Clarkson, $8—2d, to G. W. Wiggins, Lima, $5—3d, to J. Holbrook, Penn Yan.

Straw Cutters.—1st, to N. Parish, Rush, $8—2d, to J. W. Webb, Rochester, $5—3d, to R. P. Gibson, New-York.

Fanning Mills.—1st, to A. S. Patterson, Rush, $8—2d, to A. P. Dickey, Elba, $5—3d, to Stevenson & Myers, Port Byron.

Cultivators and Grain Coverers.—1st, to Harlow Mitchell, Rutland, $8—2d, to C. Wright, Adams, $5—3d, to B. Langdon, Troy.

Harrows or Drags.—1st, to M. Adams, Ogden, $8—2d, to A. Thompson, Manchester, $5.

Grain and Seed Drill.—1st, to A. Randall, Verona, $8—2d, to N. Adams, Boston, $5.

Clover Mill.—T. D. Burrall, Geneva, diploma.

Grain Cradle.—C. Goss, Madrid, $5.

H. H. Davison, Rochester, for a valuable contrivance for fixing the scythe to the snath, vol. Trans.

Wm. Gates, Barre, Orleans co., for a new and singular contrivance for raking grain after cradlers, $5.

Julius Hatch, Rochester, sowing machine, $5.

Wm. G. Borland, machine for smutting grain, diploma.

Jira Wing, Hume, Alleghany co., plan for constructing eave troughs for barns, &c. $5.

A. L. Blanchard, Albany, statue stoves, $5.

Sam'l Malony, Alexander, Genesee co., machine to drain roads and fill ruts, $5.

H. H. Everts, Mt. Morris, machine for cutting straw, &c. $3.

L. Bostwick, New-York, portable grain mill, $5.

T. R. Hussey, corn and cob crusher, $5.

MAPLE SUGAR.

Maple Sugar.—1st, to Joel Woodworth, Watertown, $15—2d, to David Dow, Batavia, $10.

SILK.

Cocoons.—1st, to Mrs. E. M. Reed, Rochester, $15—2d, to Justus Beardsley, Perinton, $10—3d, to Wm. B. Brown, Ogden, $5—to E. Stanley and John Adams, Ogden, and E. Murdock, Le Roy, each $3.

Reeled Silk.—1st, to N. D. Hart, LeRoy, $15—2d, to John Adams, $10—3d, to J. M. Hathaway, $5—4th, to Samuel R. Tracy.

Manufactured Silk.—1st, to Mrs. D. Carter, Bloomfield, $15—2d, to David Irish, Perryville, $10—3d, to Mrs. J. Howe, Avon, $5—4th, to E. Stanley, Ogden.

Silk Reel.—To E. Stanley and Seneca Reed, each a vol. of Trans.

Silk Cape—To Mrs. Raymond, $2.

Hose.—To Eliza B. Orcutt, Centreville, $2.

Shawl—To Mrs. R. Carter, Albany, $2.

Twist.—To S. Haskins, LeRoy, $2.

Sewing Silk.—To B. M. Benedict, Bergen, $2—to Enos Holmes, Clarendon, $2.

DOMESTIC MANUFACTURES.

Woolen Blankets.—To David T. Lee, Darien. $5.

Flannel.—To George Webb, Pamela, $5—Hart Massey, jr Watertown, $2,50—O. Allen, Wheatland, $2,50.

Woolen Cloth.—To Clark Corbin, Ovid, $5.

Woolen Carpet.—To Jon. J. Gillam, East Bloomfield, $5.

Double Carpet Coverlet.—To James A. North, Alexander, $5.

Linen.—To Mrs. A. Halleck, Westmoreland, $5.

Linen Diaper.—To Ezra Bishop, Attica, $5.

Hearth Rug.—To ——— ———, $3—J. M. Rockwood, Pittsford, $1,50—Mrs. J. L. Clark, Clarkson, $1,50.

Kersey—To S. M. Hanford, Perrinton, $3.

Rag Carpet.—To Orlando A. Hall, Parma, $3.

Tow Cloth.—To David J. Lee, Darien, $3.

Sewing Thread.—To Ezra Bishop, Attica, $2.

Wove Stockings.—To Ezra Bishop, $1.

Knit Stockings.—To Miss S. R. Eastman, Lodi, $1.

VEGETABLES.

Celery.—To Richard Cooper, Rochester, $2.

Carrots.—To Abner Bryant, Buffalo, $1—C. F. Crosman, Rochester, vol. Trans.

Bassano Beet.—To Abner Bryant, vol. Trans.

Blood Beet.—To N. Hayward, Brighton, $1.

Parsneps.—To William Hamilton, Rochester, $1.

Onions.—To Abner Bryant, $1.

Cabbage.—To John Mulholland, Brighton, $1.

Tomatoes.—To E. Tyler, Buffalo, $1.

Egg Plants.—To John Mulholland, $1.

Beans.—To A. H. Steen, Mount Morris, $1.

Curled Parsley.—To E. Waugh, $1.

Table Squashes.—To H. N. Langworthy, Irondequoit, $1—C. F. Crosman, $1.

Pumpkins.—To Wm. Hamilton, $1.

Watermelons and Muskmelons.—To H. N. Langworthy, $1.

Seed Corn.—To J. S. Wadsworth, Geneseo, $1.

Seed Sweet Corn.—To C. F. Crosman, $1.

Rice Corn—Wm. Blossom, Canandaigua, vol. Trans.

Table Potatoes.—To N. Hayward, Brighton, $2—to A. Fitch, Riga, $1.

Best variety Seedling.—To E. Murdock, LeRoy, $5—to H. N. Langworthy, diploma.

Specimens of Cabbages and Potatoes.—To M. Elsenbeck, Rochester, diploma.

FRUITS.

Greatest variety of Table Apples.—To David Thomas, Cayuga co., $5—to B. Hodge, Buffalo, $3—to O. Phelps, Canandaigua, vol. Trans.

Twelve best Sorts.—To Abner Bryant, Buffalo, $3.

Best new Seedling.—To Jon. Buel, West Bloomfield, $5.

Table Pears.—To David Thomas, $3.

Winter Pears.—To David Thomas, vol. Trans.

Quinces.—To Nathaniel Draper, Brighton, vol Trans.

Peaches—To N. G. Hotchkiss, Vienna, do.

Plums—To Isaac Hills, Rochester, do.

Native Grapes—To J. W. Smith, Rochester, do.

Foreign Grapes.—To Elihu Tyler, Buffalo, do.

FLOWERS.

Greatest Variety and Quantity.—To Elwanger & Barry, Rochester, $5—to Miss Wadsworth, Geneseo, $3—to Mary P. Utley, vol. Trans.

Best Floral Ornament.—To Wm. King, Rochester, $5.

Bouquet of Asters.—To Henry Billings, vol. Trans.

DISCRETIONARY PREMIUMS.

Glass.—Wm. S. DeZeng, Geneva, plain and colored glass, $10.

Honey.—G. A. Gates, Mt. Morris, 2 vols. Trans.—Thomas Wiltssee, vol. Trans.

Flour.—E. S. Beach & Co., "Akron Mills, O." Rochester, diploma.

Woolen Yarn.—H. Loomis, Rochester, diploma.
Carpet Bag.—Mrs. R. Holmes, Rushville, diploma.
H. Massey, jr. shawl, $3.
Geo. Webb, Pamela, Jefferson co., trunk, diploma.
Mrs. P. Saxe, Yates, star quilt, $5.
T. Bingham, Riga, table cloth and quilt, $3.
H. Mitchell, Rutland, Jefferson co., transverse sawing machine, $3.
W. C. Cornell, Henrietta, lamp mat, diploma.
A. S. Platt, Batavia, penmanship, do.
Theo. Backus, Rochester, knit gloves, do.
Matilda L. Davis, Batavia, embroidered shawl, $2.
S. H. Boardman, Henrietta, bee hives, $5.
S. B. Dewey, Rochester, do. diploma.
S. Davidson, Greece, new variety of wheat, 2 vols. Trans.
S. H. Boardman, Henrietta, linen sheets, diploma.
E. B. Slason, Albany, coach harness, saddles and bridles, $5.
D. R. Barton, Rochester, pitch forks, axes, hay knives, bush hooks, diploma.
Mrs. E. R. Jewett, Buffalo, embroidered table cover, $5.
Mrs. Lindsay, Black Rock, cambric quilt, thread lace, $5.
J. W. Bacon, Waterloo, embroidery, $3.
Mrs. A. Hallock, Westmoreland, black and white lace veil, $3.
J. L. Elwood, Rochester, bbl. plaster, diploma.
R. Harmon, jr., Wheatland, 14 specimens of wheat, $10.
O. A. Hall, Parma, needle work, vol. Trans.
T. C. Peters, Darien, Farmer's Account Book, 2 vols. Trans.
Andrew Menely, West Troy, church bells, diploma.
Mary Chedsey, Penn Yan, door mat, ottomans, footstools, $5.
Mrs. R. Holmes, Rushville, quilts, $3.
Nathan Post, Madrid, St. Lawrence co., Patent felt and leather collar, $3.
A. Dow, Bethany, shawl, $1.
Lucy M. Shaw, Richford, Tioga co., tuscan straw bonnet, of native grass, $8.
——— Hopkins, Auburn, English teazels, 2 vols. Trans.
Louis Chapin, Rochester, fig tree, vol. Trans.
Wm. Richardson, Albany, parasol, diploma.

PLOWING MATCH.

1st, to J. Howell, Chili, (Mr. Pare, plowman,) $15—2d, to W. Utley, Phelps, $10—3d, to W. Craig, York, $5—4th, to George Sheffer, Wheatland, (John Sall, plowman.)

BEST METHOD OF CURING CORN.

Our Indian corn crop is one of the most valuable, if not *the* most valuable crop cultivated in the United States, and every thing relative to the best methods of growing and securing it are proportionably important. In securing Indian corn, two methods are commonly used; the first, is to top the corn, by cutting the stalk immediately above the ear, and this is usually done as soon as the grain is glazed, though some farmers scarcely wait for this. The second, is to cut up the corn by the bottom as soon as the ear is glazed, bind the stalks and ears in small bundles, set them up, and let them stand till thoroughly cured. In the first method only the upper part of the stalk is saved for fodder, but the corn ripens finely, and nothing can be more beautiful than a field in which the husks have fallen from the ripened grain, and the thick golden ears give a promise of the rich harvest at hand. Still we prefer the second method, and that from ample experience of both. We have our corn cut up by the bottom, because in that way we save the whole of the stalks for fodder, and that is no unimportant matter to the farmer. In topping, only the poorest part of the stalk is saved, for if cut and cured properly, there is no more nutritious food for animals than the stalk of corn. It is true, when very large, cattle and sheep are unable to eat them; but if converted into chaff by a cutting machine, as they can easily be, there is no food eaten more readily, or with more profit. It is not hazarding much to say that there is more value in an acre of cornstalks cut by the bottom and properly fed out, than in an acre of ordinary hay, and no farmer can afford to dispense with such an item in providing for his stock. But the saving in the stalk is not all; experiments show that there is a gain in the grain of nearly 20 per cent in cutting by the bottom, in preference to topping. Experiments made by Mr. Clark, Judge Buel, and others, and recorded in the volumes of the Old Genesse Farmer, and the Cultivator, place this matter beyond a doubt. In one made by Mr. Clark, he found the yield per acre of the corn topped, to be 47 bush. 18 lbs., and the untopped, 60 bush. 8 lbs. From some experiments instituted by ourselves several years since, it was ascertained that there was no difference of consequence in the product, when the corn was left on the untouched stalks till harvest, and when they were cut by the bottom after the corn was well glazed, but that both these methods gave a greater product than when topped in the usual manner. It is said that when corn is topped, and after the corn is gathered, that cattle will eat all that is valuable of the stalks as they stand in the field. This is certainly a mistake, as the most nutritious part, the main stalk itself, is generally left untouched by them. If the corn crop is well manured, as it should be, the cultivation of the season is an excellent preparation for wheat, and some of the best farmers of our country use the corn crop for this purpose. In this case cutting up by the bottom is indispensable for the getting in of the wheat properly; and if it is intended to follow the corn with spring crops, as is frequently done, such as wheat, oats, or barley, it will be found that the absence of the large stalks that disfigure corn grounds when only topped, will greatly facilitate both the putting in, and the harvesting of these crops. For all these reasons, and the additional one, that it is only by cutting at the bottom that corn can be saved from the effects of early frosts when they occur, we are decidedly of the opinion that the corn crop of the country might annually be increased in value, were the method of cutting it by the bottom as soon as the grain is fully glazed, to become general.

For the relief of secret sorrow and the preservation of deep rooted joy, the only resource is to be found in heartfelt piety.

SCOTCH HIGHLAND AGRICULTURAL SOCIETY.

The annual meeting of this first of Agricultural Societies, was this year held at Dundee, in the early part of August, and our kind friends in that part of Great Britain, have put us at once in possession of the proceedings. In the numbers attending, the vast herds of beautiful animals on the ground, and the general interest and satisfaction evinced by all, the present Show appears to have eclipsed all that have preceded it. In this meeting, politics and party are cast aside, and rank, wealth, and intelligence unite to render the occasion worthy of its name. Our Agricultural Envoy, Mr. Colman, was present, and replied to a complimentary toast in his usual felicitous manner. We have no room for particular details, but it is gratifying to every true friend of agriculture to witness the spread of the interest felt in its success, and the efforts made to place the tiller of the soil in his true position. The show of the Short Horns was the finest part of the exhibition, (and wherever they are found, where is this not the case?) the animals being superior to any that have been shown at the Society's meetings. The show of horses, particularly of mares, was very fine; and Mr. Webb of Babraham, from whose flock Mr. Rotch derived some of his finest sheep, sent some of his animals 400 miles to compete for the prizes, one of which, the premium for the best shearling ram, 10 guineas, was obtained by him.

THE HORSE, BY YOUATT.

One of the most useful books which the impulse given to agricultural knowledge within a few years, has produced, is the work on "The Horse," by Youatt. Since its publication in 1831, its sale has been great and constant, and its circulation considerable even in the U. States. A new edition, prepared by T. Coates, was published in London last March, and this we are happy to say, has been re-published by Lea & Blanchard, in a beautiful style, and at a cheap rate. But the principal additional value of this new American edition, is a thorough revision to adapt it the more exactly to the circumstances of this country, and a most valuable introduction, by J. S. Skinner, well known for his labors in the cause of agriculture, and editor of the Turf Register. The introduction shows Mr. Skinner to be a thorough master of his subject, and the mass of information he has brought together on the history of the horse, the improvement, character, and performances of that noble animal, is such as could have been collected only by one who understood and appreciated the subject of which he was treating. He has also added a valuable essay on the Ass and the Mule.

The history of the English horse, from which ours is derived, as traced by Mr. Skinner, from the first notice of them in the days of Julius Cæsar, when they became great favorites at Rome; the successive importations and infusions of German, French, Spanish, Barbary or Arabian, and Flemish horses, with the effect of these various crosses, is most admirably given by Mr. S., and did our limits permit, we should at once lay it before our readers. He shows that the finish of excellence was given to the English horse, by the Darley Arabian and Godolphin, to such a degree, that in speed and strength, no improvement has since been made by crosses with the Arabian or other breeds. The *turf* he considers the great foundation of improvement in the horse, and that the blood of the thorough bred, is the true source to which we must look for bone, muscle, and action, all in the right place. By skillful crosses with other breeds, the hunter, roadster, and the best farm horses, have been produced, animals of far more practical value than the thorough bred animals for all the purposes named. It strikingly illustrates and supports the position, that by skillful selection and crossings, cattle may be produced of which the Short Horn shall be the base, superior even to that celebrated breed for domestic and agricultural uses. The improvement of animals, or the science of crosses, we consider as but in comparative infancy; and we hail with pleasure a work like the "Introduction," calculated still farther to advance this great interest. We thank Mr. Skinner for this volume, and the labor he has bestowed upon it; it will prove a most acceptable present, we cannot doubt, to the public, and should be in the hands of every one who keeps a horse.

SMUTTY WHEAT.

It is a fact not to be disputed, that a very large portion of the wheat grown in the United States the present year, contains more or less smut. We notice complaints of it from every quarter, and almost every state, and in many cases the quantity present will be a serious drawback on the value of the crop. To what is this general prevalence of the smut to be attributed? Not to any thing unfavorable to the crop during the present season, for all are aware that the quality of the wheat grown was never better; but in the midst of this beautiful wheat, the dark green, upright ears of smut, some lower and some higher, were generally to be found, the berry as plump as that of the pure wheat, but fœtid, nasty, black, sure to injure it for seed, or spoil flour, if ground in mills not furnished with the best apparatus for cleaning.

Two probable causes only can be assigned, and of these both may have been active, or more or less co-operated to produce such a result. One cause assigned, is the unfavorable state of the weather during the month of September, or the time in which the wheat crop of this country is usually put in. From the 6th to the 20th, there was scarcely a day in which some rain did not fall, and those who took advantage of the best days to sow, were obliged to do it on ground unfit for the reception of seed; while those who were from the condition of their fields obliged to wait, sowed too late, and in most cases on soils still too wet for healthy germination and vegetation. The unfavorable condition of soils generally at the time of sowing, and the lateness of putting in seed generally, cannot be denied; but we think the perishing of so large a portion of the plants during the winter, rather than the smut, the result of this late or unfavorable sowing; as we have seen smut in abundance from fields sown early, and while the soil was in first rate order.

The other cause to which we have alluded as the cause of the increase of smut, is the decrease of the practice of liming wheat before sowing. 30 years since, smut in wheat was one of the greatest evils the farmer had to encounter. The practice of soaking or washing seed wheat in brine, and then drying it with quick lime, was discovered and generally adopted, and in a few years smutty wheat nearly ceased to be known. Many farmers, it is true, were too lazy or careless to lime their wheat, but such frequently purchased their seeds from those who had grown it pure by that treatment, and for many years it was rare to find a load of smutty wheat sent to market. The danger apparently past, the practice of brining and liming has gradually fallen into disuse, even with good farmers, and the natural result has been, that smut in the wheat crop is again rapidly on the increase, and threatens to become as injurious as ever, unless preventive means are promptly resorted to, such as were before so effective. That smut is infectious, or can be communicated from diseased to pure grain, is a fact as well established as that the itch or small pox may be spread by contact or inoculation; and every measure intended to guard against it, should be based on a knowledge of these facts. Peculiar conditions of the soil, or of the weather, may be more favorable to the action of these injurious causes than others, but no matter what the weather or soil may be, the farmer who sows smutty wheat, without precautionary measures, must not be disappointed at finding it in increased quantities in his next crop. The concurrent testimony of wheat purchasers and millers, that smutty wheat has been gradually on the increase for several years, should put farmers on the alert, and induce a general recurrence to some measures for arresting the evil; and when the evil is one that may be so easily and quickly removed, there can be no excuse for permitting its continuance.

TEMPERATURE OF AUGUST.

August is usually the warmest month of the year, or that in which the average temperature is the highest. July has usually the hottest days, but the average is generally below that of August. To show that the August of the present year has been the warmest month that has occurred in a number of years, we give the average temperature of that month for the last six years. The month that comes the nearest to it, was July, 1841, which only fell 1° short. The average is obtained from observations made at 9 A. M. and 2 P. M., observation having shown that those hours furnish an average better agreeing with the general temperature than any other.

Year.	Average temp. of August.
1838	69°
1839	68½°
1840	72°
1841	75°
1842	70½°
1843	77½°

That the temperature of the present season has been a favorable one for the crops generally, their abundance throughout the country sufficiently testifies. The early part was cooler than usual, which while it was bad for corn, was very favorable for wheat, giving the plant a better time to root previous to its throwing out the seed stem, than that grain generally has in this country. On the contrary the hot weather of part of July, and the month of August, operated favorably on corn, without producing any injurious effect on wheat, as that had so far advanced as to be beyond danger from that cause. This modification of the weather, accounts for the superior quality of the wheat berry, and the greater yield beyond what was anticipated by the farmer generally; and although the corn crop is somewhat late, it promises to be a full medium one, unless in some few districts where drouth operated to its injury. The hot dry weather of August will tell more on the root crops, particularly potatoes, than any other ones; and our farmers generally may expect at the harvesting, "small potatoes and very few of them." The tap rooted cultivated plants are looking finely, and the beets, carrots, &c., promise very well. There have been few years in which the seed wheat has been put in earlier, or the ground in better condition, as a whole, than the present. Indeed there is some reason to apprehend from the quantity of wheat sown in August, and the first days of September, that we may hear some complaints of the fly previous to the next harvest, as the early sown wheat plant will be sufficiently advanced to enable the autumn hatched fly to deposit its egg, and mature the chrysalis previous to frost. The danger from this source, however, is in general not great, as it is only where the fly has prevailed extensively, that two generations of this pest are commonly produced annually; one to deposit its egg in the young wheat plant, in which it remains over the winter; and one produced from these, to renew its attack as soon as the plant commences growing in May or June.

Youth is the spring time of the affections.

Prize Essay.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD,
Associate Editor of the Cultivator.

(Continued from page 143.)

USE OF PEAT OR SWAMP MUCK.—According to Mr. Colman, in his Fourth Report, two-thirds of the manure used on the extensive garden and farm of Mr. Cushing, near Boston, is made from meadow muck or peat. The compost, for top dressing meadow and grass lands, is made by taking the muck from the pit in August or September, where it lies to the next year. The compost heap is then made on some convenient place, by spreading a layer of muck eight inches thick; on the muck four inches of ashes; then another layer of muck, and so on for five layers, making a pile five feet high, in the form of a ridge. This lies through the winter, is opened and mixed in the spring, and the next fall is spread on the land. The compost for plowed lands is made of two-thirds muck and one-third manure. Fresh manure, or that which has not fermented, is always used, and care is taken not to put in so much muck as to prevent the compost's heating. The fermentation of the manure decomposes the muck rapidly, and when this is done, the compost is fit for the land. Horse manure or unslacked lime, accelerates the fermentation—colder manure retards it. It is the opinion of Mr. Cushing and his gardener, that muck for mixing with cow dung, or for putting in hog styes, should be dug from the swamp six months before using, as the action of the atmosphere facilitates the change necessary. Muck, without this preparatory fermentation, they consider of little importance as a manure.

POND MUD.

Pond mud, although not as rich in vegetable matter or humus as swamp muck or peat, is still one of the most valuable of fertilizers. The quantity of earthy matters it contains, is rather an advantage than otherwise, when applied to light or sandy soils, and will rarely be found injurious on any. As a manure, the action of pond mud is more immediate than that of unfermented muck, owing to the much greater proportion of salts and silicates it contains. It is astonishing what quantities of this manure are lying worse than useless in the thousands of mill ponds in our country. In the winter of 1839-40, Mr. Whalen of Saratoga co., drew from a pond on the Kayaderosseras creek, 1,000 loads of pond muck, and put it on a field of 17 acres; soil light and sandy, or gravelly, and reduced by *skinning* until it would produce nothing but sorrel and mullein. This field, planted to corn, gave him 850 bushels. The extra product from the use of this manure, he estimated at twenty bushels per acre. In the winter of 1840-41, he took from the same pond 700 loads, and applied it to two other fields, and with similar results. Mr. Whalen has also, at different times, drawn 800 loads of muck from an ash swale, and found it to nearly or quite equal in its effect on vegetation, the pond mud. After the corn, Mr. Whalen has uniformly grown oats; and on these worn out lands, where he formerly would have lost his seed oats, as well as the grass seeds used, he has been successful, both taking well where the mud or muck had been used. For heavy loams or clay, Mr. Whalen is of the opinion that a mixture of lime or yard manure, with the muck or mud, would be indispensable. This mixture, the experience of Mr. Clark of Northampton, and others, shows, is well effected by placing the muck in the cattle yards or pig styes, to be incorporated with the manures by the feet or noses of the animals, and to act as absorbents of the urine and soluble matters that are too frequently lost.

NIGHT SOIL.

Night soil, or the contents of privies, is one of the most powerful and valuable of manures; but prejudices, combined with the difficulties formerly attending its use, have prevented much attention to it in England or the United States, until within a few years. In consequence, a substance of the greatest importance to the farmer has been regarded as a nuisance, and, in the vicinity of large cities, has truly been so. Now, since science has taught the mode of preparing it for use, its use is becoming general, and its value fully appreciated. According to the analysis of manures, made by Boussingault and by Dr. Dana, there is no manure ordinarily accessible to the farmer so rich in the carbonates or salts of ammonia as this. This will be seen by comparing it with horse dung, the value of which is well understood.

	Horse Manure.	Night Soil.
Geine,	27.	23.
Salts,	.96	1.2
Carbonate of ammonia,	3.24	15.32

HOG DUNG.

The dung of the fattening hog approaches night soil in value, more nearly than any other; indeed, Dr. Dana supposes that for all the purposes of analysis, these may be arranged under one head. In practical use, Von Thaer, on the Prussian government farm, determined by experiment its comparative value as follows: If a soil without manure, would yield three bushels of produce for one sown, manured with different substances the result was,

Without manure,	3 for 1 sown.
With cow dung,	7 " 1 "
With horse dung,	10 " 1 "
With night soil,	14 " 1 "

COMPARATIVE VALUE OF NIGHT SOIL.

In some experiments made by Arthur Young, and detailed in the Annals of Agriculture, the effect of this manure on wheat was as follow:

Simple soil, per acre,		12½ bush.
Bushels of night soil,	320	37½ bush.
" "	240	32½ "
" "	160	31½ "
Cubic yards of farm yard compost,	60	25 "
" " " "	30	23¾ "
30 do. and 1 cubic yard of chalk,		25 "

Applied to potatoes, the results were not less decisive:

Simple soil produced per acre,	120 bush.
Night soil, 10 wagon loads,	600 "
Bones, 10 "	650 "
Hog dung, 60 one horse cart loads,	480 "
Yard compost, 60 one horse cart loads,	300 "

POUDRETTE.

The most common method of using night soil, or at least that in which it is most portable and least offensive, is to convert it into poudrette. This is done to the best advantage in large manufactories; and hence they are usually established in the vicinity of large cities, where the original article is easily obtained. Different processes are adopted, but the most common is to slowly dry the night soil in pans, having previously mixed it with plaster or ground peat. The object in adding plaster or peat, is to prevent the escape of ammonia, on which the value of the manure is mainly depending. The dried mass is then pulverized—is perfectly inoderous, resembles a dry brownish powder, and may be used broadcast or in drills. In Paris, a powerful manure is made, also called poudrette, by boiling the offals of the slaughter houses into a thick soup, making this into a stiff paste by stirring in coal ashes, then drying and grinding.

URATE.

Urate is a manure formed from a compound of urine, sand and plaster of Paris. In Paris, where the manufacture is most perfect, the gypsum is burnt previous to using. The value of the urates, as a manure, will be better understood from the annexed table.

Water,	65.
Urea,	5.
Bone dust,	5.
Sal ammoniac and muriate of potash,	15.
Sulphate of potash,	6.
Carbonate of potash and ammonia,	5.
	100

From this, it will be seen that urate abounds in those substances most necessary to give fertility to soils. Dr. Dana remarks that a cord of loam, saturated with urine, is equal to a cord of the best rotted dung; and in some experiments made by the French Royal Society of Agriculture, which may be found detailed in the *Dictionnaire d'Agriculture Pratique, Paris,* 1828, for the purpose of comparing it with night soil, pigeon's dung, &c., known to be very effective, the result was in favor of the urate. When mixed with dried night soil or poudrette, its effect on various crops was very great. From the experiments there instituted, it appeared that urate alone acted most favorably in moist seasons. It must be remembered, however, that night soil, when properly prepared, retains all the urine, or rather its fertilizing qualities; and the fact that urine is of itself so valuable a manure, should put farmers on their guard against suffering it to be lost from their stables and yards, as is usually done.

USE OF NIGHT SOIL.

Where the farmer is so situated that no poudrette manufactories are within his reach, he will find that by making it into a compost with swamp muck, ashes, peat or gypsum, he will have a manure that may be easily applied, and which will possess great fertilizing powers. The Chinese have long been celebrated for the extensive use of night soil. Their method is to make it into cakes with a rich marl, which, when dried in the sun, constitute a regular article of traffic, almost a legal tender. The Flemings were the first of the Europeans to make a common use of night soil as a manure, and hence its name of Flemish manure. There it is applied directly, and without preparation, to any crop for which manure is wanted; and the superiority of Flemish agriculture, and the great fertility of their soils, may be, in a great measure, attributed to their careful saving and use of matters which others have been most anxious to be freed from. In Spain, the celebrated asparagus of Saragossa is grown on beds of loose gravel and sand, but a little above the flow of the tide; but these beds are heavily manured, after the cutting of the season is closed, with fresh night soil dug in, and thus their fertility is sustained, and the unrivaled character of the Saragossa asparagus maintained.

BONES.

Bones, ground or crushed, form another powerful manure; and although but little used as yet in this country, there are some indications, such as the erection of mills for crushing them, that their use will soon become extensive, and our farmers be saved the mortifying spectacle, so long witnessed here, of seeing ship loads of bones exported to Europe, used by farmers there, and returned to us in the products of the soil. Col. St. Leger of Wormsworth, was the first to introduce bone manuring into England, in 1775; but it was many years before their value was fully understood; and it was only in connection with the turnep culture, that they came into general use. The manner in which bones act as manures, and their value, will be best seen by a statement of their constituents. The bones of the ox, according to Berzelius, contain in 100 parts:

Cartilage,	33·3
Phosphate of lime,	55·35
Fluate of lime,	3·
Carbonate of lime,	3·85
Phosphate of magnesia,	2·05
Soda, with a little common salt,	2·45
	100·

The analysis of Fourcroy and Vauquelin, gives:

Gelatine and oil,	51·
Phosphate of lime,	37·7
Carbonate of lime,	10·
Phosphate of magnesia,	1·3
	100·

Johnson, in his lately published work on Fertilizers, says: " Dry bones contain about two-thirds their weight of earthy matter, the other third chiefly of animal matter, resembling glue. Of the earthy matter, five-sixths consists of phosphate of lime and magnesia. A ton of bone dust, contains of

Animal matter, about	746 lbs.
Phosphate of lime, &c.	1,245 lbs.
Carbonate of lime, &c.	249 lbs.

Bones, however, vary somewhat in their constituents, some containing more of the earthy, and others more of the animal parts; take those of the calf and the elk for examples, to which the teeth of the horse are added.

	Phospate of lime,	Carbonate of lime.	Animal matter.
Calf,	54.		46.
Elk,	90.	1.	9.
Teeth,	85.5	15.5	

USE OF BONES.

It is evident then, that bones abound in matters capable of producing ammonia. Dr. Dana estimates its power in this respect to be equal to 8 or 10 times that of cow dung, while, if the salts are regarded, 100 lbs. of bones contain nearly 66 times as much as the same quantity of cow dung. Experience proves that the power of aiding crops, between dung and bones, is about in the proportion of the constituents named. It is evident that much of the value of bones depend on their cartilage. Boiling bones, as generally practiced, has but little effect in extracting the gelatine; and does not remove even all the fat or oil. Under high pressure, as in Papius's digester, the separation of the animal from the earthy matter is complete. The finer bones can be crushed or ground, the better or quicker will their influence be felt; and boiling, by removing the exterior cartilage and fat, renders the crushing more perfect. It is owing to this cause, undoubtedly, that many of the English agriculturists prefer dry to fresh bones; as the dust made from the former, is more suitable for sowing or drilling with seeds, than that of the latter. Bone dust is the most efficient on light and dry soils. It has been found also very useful on limestone soils and light loams; but on heavy clay or wet soils, this manure does little or no good. Bone dust is one of the most efficient manures on clover, particularly the white clover; exceeding gypsum in its effects on this plant. This is accounted for by the fact, that white clover abounds in phosphate of lime; and the phosphates of bones supply it in abundance. Although principally employed as a manure for turneps, in consequence of their importance in a rotation of crops for the animals of the farm, particularly sheep, it is considered by many farmers quite as useful, employed as a manure for potatoes, as it is for turneps. Bones are found to be more valuable, if subjected to a partial fermentation before being applied to the crops. If mixed with five or six times their weight of vegetable mold or fine rich earth, and turned over for several times for a few weeks before using, the value is much increased. Since the general use of bones has been introduced into England, vast quantities are gathered and imported from all parts of the world. As an instance of this traffic, it may be mentioned that at Hull alone, in 1815, 8,000 tons of bones were imported; and this amount, at the same place, had increased in 1835, to 27,500 tons.

GUANO.

Guano is another manure of animal origin, which has lately been brought to notice. It is the excrement of sea birds; and the immense masses of it existing on the rocky isles of the Pacific, in the vicinity of Arica in Peru, are the accumulations of centuries. That, in this state, it differs from the newer excrements, can scarcely be questioned, as the action of the atmosphere must have produced many chemical changes during the lapse of years. Analysis shows it to consist chiefly of insoluble and soluble salts, chiefly phosphate of lime and organic matter, or salts 32 parts, and organic matter, 68. A large portion of the organic matter is uric acid and ammonia; and regarded as a manure, it may be considered as a urate of ammonia. It appears as a fine brownish powder, with a strong marine or fishy smell, and gives off ammoniacal fumes when heated. Several ship loads of this manure have been carried to England; and the experiments show, what indeed the analysis would prove, that it is to be classed among the most efficient of manures. It has succeeded well, whether applied to grain, grasses, or to roots. There is no necessity of enlarging on this manure here, as it is not probable that it will ever be introduced to any extent into the United States, while we have so many easily accessible sources of fertility that have as yet hardly been touched, among us. It may be mentioned in this place, that the dung of domestic fowls is one of the most valuable of farm manures, far exceeding in power even that of the hog or horse; and though not equal to guano in ammonia, probably from there not being as much animal food used in its production, still deserving more attention in this respect that it has received.

VARIOUS ANIMAL PRODUCTS.

All animal products, capable of putrefaction or decomposition, can be converted into manures; fish, flesh, gristle, sinews, skin, horns, hair, wool, and indeed all animal solids or fluids are of this character. The man who allows his dead animals to putrify and waste away above ground, is guilty of great improvidence; and converts what might be made a valuable manure into a decided nuisance. A dead horse, covered with earth or vegetable mold, mixed with a little lime or gypsum, will, when decayed and converted into manure and spread on the soil, add to the value of the wheat or corn grown, not enough perhaps to buy a valuable new one, but not unfrequently more than the worth of the original animal. A more disgusting sight can scarcely be imagined, than to see the fences and trees around a farmer's yard dressed out with dead lambs or other defunct animals in the spring season. All such, should be buried at once, and thus made available in other forms.

FISH.

Of the substances named above, fish is the one most commonly used as a manure. In the vicinity of the sea, large quantities of fish are annually used in enriching the soil. This is particularly the case on Long Island and in Rhode Island. They are sometimes spread broadcast on the earth and plowed in; at other times deposited in the hills of corn; sometimes spread over the meadows after the crop is mowed, and allowed to putrefy in the open air. The stench, where the putrefaction goes on in the open air, is intolerable; and can only be endured by those whose olfactories have been accustomed to the nuisance. This is a most wasteful practice, and should long ago have been abandoned. Treated in this way, but a small part of the actual value of the fish is realized; and it is not to be wondered at, that where the methods of using this manure are so different, widely different ideas of its value should be entertained. Fish should never be used fresh, or thrown at once upon the soil. The true way of preparing them as a manure, is to make them into compost, by placing them in layers with muck, rock weed, peat, or even common loam, to putrefy. Where the soil is heavy or inclining to clay, where the compost is to be used, common shore sand, containing as it does large quantities of particles of carbonate of lime, will be found useful as a composting ingredient with the fish. When the fish are decayed or putrefied, the mass should be dug over, the parts thoroughly mixed, and if much ammonia or offensive gas is liberated, a covering of earth should be given, and the mass be allowed further to ferment before using. In this way, fish never fail of being a valuable manure. Rock weed, eel grass, or in short any of those vegetable or animal matters that abound on the sea shore, may be advantageously used in the preparation of these composts.

REFUSE OF FACTORIES.

There are many manufactories, particularly those of skins, furs and wool, where large quantities of manures of the most powerful kind are annually suffered to go to waste, though to a much less extent than formerly. The refuse of such establishments, now frequently considered, and justly as now treated, a nuisance, may, by simple application to the soil, or still better by being made into compost, be used as the best of fertilizers. One of the best farmers and most successful breeders of our country was driven into the business of agriculture, in self defence as it were. He was an extensive manufacturer, and the difficulty of disposing of the refuse and waste of the establishment, compelled him to purchase a farm in the vicinity of the city, in enriching which, these matters have been most successfully employed. Those farmers who formerly could not be induced to receive such refuse materials as a gift, would now, after the proof they have seen of their value, be happy to purchase them at a liberal price. The furrier, the tanner, the morocco manufacturer, comb maker, &c. &c. are all dealing in materials of the utmost value, when applied to the soil as manure; and the farmer little understands his true interests, who, living in the vicinity of any of these, does not avail himself of these refuse matters to the utmost extent permitted.

MANURE OF WOOL.

Perhaps there is no substance more rich in matters valuable as manures, than the washings and refuse of woolen factories. Chaptal was one of the first to call attention to this matter, and the instances he gave of their fertilizing power were of the most convincing kind. It is but very lately, however, that any attempts have been made in this country to render the refuse of our factories available. All remember, when around every factory and every clothier's shop in the country, piles of refuse wool, clippings, pickings of cards, and sweepings, accumulated in masses, never thought of as of value, but considered as matter of which the owners would most happily be quit. The method of disposing of them, when they could no longer be tolerated, was to throw them into the river; to apply them to the garden or farm was not once thought of. Not long since, in one of our villages, I noticed a garden, the vegetables of which had a luxuriance forming a striking contrast to others near them, and the cause of the difference was asked. "It is all owing to the refuse of that clothier's and carder's shop," was the reply. "I saw in the Cultivator a notice of the value of such manures, and the owner of the shops gladly availed himself of my offer to remove it at my own expense. I gave my garden a good dressing, and as this is the second year, you may judge of the value of the material as a manure. It is probably the last I shall obtain, however," he added, "as the mill owners, after seeing its effect on my garden, are now as anxious to save this refuse matter as they were before to get rid of it." The oily or sweaty matter on unwashed wool, is a soapy substance having a base of potash, with an excess of oily matter, with slight traces of the carbonate and muriate of potash, all valuable as manures; and as all are easily soluble in water, such water should never be lost. A wool merchant at Montpelier, had his washing house in the midst of a field, the greater part of which he had, by the use of this wash, with which he watered his plants, transformed into a fine garden. The experiments made by Judge Buel and by Mr. Bement, with hog's bristles and horn shavings, were conclusive as to the value of these substances for manures. In short, as all substances of this nature are nearly pure gelatine, with a slight addition of the phosphates of lime, it is evident their decay must furnish an abundant supply of ammonia to plants, and therefore render them valuable as a manure.

LIQUID MANURE.

There is but one other manure of animal origin to which it will be necessary to allude in this place, and that is urine, or as it is commonly called liquid manure. Analysis proves that this is a substance peculiarly rich in materials required by plants, and experience enforces the results of analysis; yet not one farmer in a thousand makes an effort to convert this mine of riches to any account, but the whole is most generally lost to him. Dr. Dana gives the following as the constituents of cattle urine, which may stand as the type of all others, though human urine and that of the horse differ from this in the character and quantity of some of the salts contained in them:

Water,	65.
Urea,	5.
Bone dust,	5.
Sal ammoniac and muriate of potass,	15.
Sulphate of potash,	6.
Carbonate of potash and ammonia,	4.
	100.

VALUE OF URINE.

Compared with cattle dung, it will be seen that while that gives only 2 lbs. of carbonate of ammonia to 100 lbs. of dung, the urine gives 5 lbs. of ammonia in its urea, and nearly three times that amount in the other ammoniacal salts. One-third of urine is composed of salts, whose action on vegetation is of the most energetic and favorable kind; and yet there are thousands who call themselves pretty good farmers, who use all reasonable precaution to preserve the solid parts of their animal manures, that have never made an effort to save that which is of far the greatest value, the liquid part. But it must not be forgotten that soils must contain decayed organic matter or humus for these salts to act upon, otherwise liquid manure or pure urine can do no good. Where the wash of the barnyard and stables is saved, the loss of a large part of the urine is prevented; but when, as is too often the case, this is wholly lost, not only is the urine thrown away, but a large part of the soluble humus of the manure accompanies it. It is an excellent plan, therefore, to have some reservoir for the reception of such liquid matters as would otherwise be lost. If this cannot be done, cover the bottom of your yards with muck, or even common loam, as this will absorb and retain much of the urine and liquid matters of the dung. Experience has demonstrated that a load of loam, saturated with urine, has a more powerful effect on vegetation, than the same quantity of best rotted stable manure. Human urine is richer in salts useful to vegetation than any other, containing, according to Dr. Thompson, in 1,000 parts, 42½ lbs. of salts. The slightest attention on the part of the farmer, might prevent the loss of this; and many a load of swamp muck, or loam mixed with gypsum, might, when saturated with urine, be added to his available manures. Liquid manures, or rather urine, differs much in the salts it contains, according as the food is rich or otherwise. "White turneps give a weaker urine than the Swedish, and green grass is worse than either," according to Dr. Dana. Turner and Liebig found that the urine of fattening animals is richer in salts than that of store animals. Indeed, the law so well known with regard to solids, that the richer the food the more valuable the dung, it is probable holds good in regard to the urine also.

SOOT.

Soot is a valuable manure, peculiarly rich in humus as well as salts, and in its composition more nearly allied to the solid substance of animals, than any thing else. It contains of humus or geine 30.70, of nitrogen 20., and of salts of lime 25.31 parts in 100. It also abounds in salts of soda, potash and ammonia. According to the analysis of Dr. Dana, 100 lbs. of soot contains as many of the valuable salts as a ton of cow dung, and its nitrogen, compared with that manure, is as 40 to 1. The ordinary farmer can make but little use of soot, as it is not to be had in the country in any considerable quantities; but those in the vicinity of cities may avail themselves of this manure with much profit. For the gardener or the floriculturist, soot is an excellent manure; but care must be taken not to use it too freely, as we have known tender garden plants at once destroyed by too liberal applications of it, particularly in a dry state. Mixed with water, in the proportion of six quarts of soot to one hogshead of water, it has been found a most efficacious liquid for watering plants, particularly those grown in green houses.

ASHES.

Ashes, leached or otherwise, are of great value as a fertilizer, especially when used on soils that are sandy or light. Unleached, the potash contained goes to form silicate of potash, and gives the supply of silex necessary for the stems of the grasses or corn; and leached, although the potash is the greater part of it separated, the remaining phosphates of lime and magnesia go far to restoring to the fields on which such ashes are strewn, the necessary matters of which previous cropping has deprived them. 100 parts of the ashes of the wheat grain contain 32 parts of soluble, and 44 parts of insoluble phosphates, in all 76 parts. The value of ashes abounding in the required phosphates, when used on grain lands, may be seen at once, as well as the folly of those farmers who waste or sell the ashes produced in their dwellings.—*(Conclusion in our next.)*

SELECTION OF STOCK, &c.

MESSRS. GAYLORD & TUCKER—For several past I have been a subscriber and constant reader of your truly valuable journal, although but a few years have elapsed since my attention has been turned to that noble occupation, cultivating "mother earth." Now, Messrs. Editors, although this is our first introduction, you may probably think that I am disposed to complain or find fault with every thing. Not so. Still there are some communications that I do in serious candor think ought to be censured. For example—the various breeds of improved cattle, hogs, and sheep. It is impossible for any one to determine the true merits of the various breeds, as I find that "it is all fish that comes to our net." Each breeder or importer is sure to laud his own stock to the skies. Self-interest is so strongly depicted that a stranger or novice can come to no certain conclusion. Now I am building machinery for horse power, and wish to purchase a threshing machine, crusher, cutting box, clover *getting out machine*, corn sheller, &c. I want them all of the most approved kinds. I take up the Cultivator, volume after volume, and read all the various puffs, and am left as much in the dark as though I had not read any thing about them. A. B. N.

N. B. If you will tell us how to kill bamboo vines and ribbed leaf or French plantain, you will not only "improve our minds," but also our purses.

Three Otters, Bedford co., Va., 1843.

We wish to make one remark in reply to our friend "A. B. N." In the papers which we give from our correspondents, on the various breeds of cattle, the different kinds of agricultural implements, &c. &c., we are not to be understood as expressing any opinion on their actual merits or value. Where personal experience enables us to speak, we do so without hesitation; but we are not to be considered as endorsing the mere opinions expressed by others. There are many excellent breeds of cattle in our country, and that the owners and breeders of these varieties should express opinions favorable to the animals of their choice, is what is to be expected. So with agricultural and farm implements. The maker or improver of what he deems a valuable implement, wishes to bring it to the knowledge of the agricultural public, and it is for their interest he should do so, and for this purpose a communication, or an advertisement in the Cultivator, is found to be the most effectual method. We spread these notices before our thousands of readers in all parts of the U. States, and it is for them to decide whether the animals, or the implements, are, under all the circumstances, the ones best adapted for them. Without the means of comparing their merits by actual test, we can only give descriptions and opinions, and leave those interested to decide whether the animal or the implement, is the one most suitable for his location, the condition of his plantation or farm, or the crops he can grow upon it. The animals which would succeed well in one part of the country, may not in another. Those that grow to a great size, and in a short time, require more and richer food than those that are smaller, and slower in their growth to maturity. The plow, and other implements of the farm, require to be somewhat differently constructed on different soils. What may be expedient in one place may not be so in another. We aim to furnish the facts by which a farmer or planter, exercising his own reason and judgment, may determine and select for himself the most suitable animals and implements—may find himself in a situation to improve both his mind and his soil.

With the bamboo vine we are unacquainted, but should suppose careful cultivation would exterminate it. Our method of destroying the ribbed plantain, is to prevent its going to seed in any case, and carefully digging it wherever it appears; and this method, it should be remembered, will effectually destroy in a short time any weed whatever.

CULTURE OF RUTA BAGA.

WE were furnished last winter, with the following statement relative to the cultivation of a crop of ruta bagas on the farm of GEO. J. PUMPELLY, Esq. near Owego, in the year 1842. The paper was mislaid, or it would have received an earlier insertion. The product was a large one—equal to about 1,375 bushels per acre—and creditable to Mr. McIntosh, who had charge of the farm:

"Land—79-100ths of an acre—sandy loam. Year previous in potatoes—*no manure*. Now thoroughly plowed, harrowed, and ridged, at 2½ feet. Manure well rotted, and placed in the furrow, upon which the ridge was turned— say 20 loads. Seed sown thick—twice the usual quantity,—on 15th to 20th May. 3½ days putting in the crop, with horse, team, and two men.

First hoeing,	3	days, and	2 men.
Second "	2½	"	2 "

Harvesting delayed by an early and hard frost. Turneps topped and clipped, and carried in cart to cellar—none buried.

There were 58 cart loads, weighing upon an average, as tested by actual weight, 1,100 pounds; making at 60 pounds to the bushel, 1,063 bushels."

Where is true happiness but at *home?*

Original Papers from Contributors.

WESTERN FARMING.

To my friend "Richmond"—Your communication in the August No. of the Cultivator, as well as your private letter to me, have both been read with pleasure. Your detailed statement of the advantage of manuring, must certainly be useful to all eastern farmers, and the time will come when the same system will have to be adopted in the west; but at present, it is a mooted point whether manuring our prairie soil will pay the expense. My own opinion is, that for corn and potatoes it will, and for small grain it will not. It is a fact that wheat, oats, rye, &c. grow without manure extremely luxuriant in favorable seasons. In this vicinity, our wheat is extremely likely to winter kill—generally by heaving out; but last winter it was to a very great extent killed in another way, which I will describe. The ground, previous to the January thaw, was but little frozen, and the wheat remained green under the snow, which was melted off, and by a sudden change to severe cold, was formed into a complete coat of ice over the level surface, so as to exclude the air from the wheat, killing entirely thousands of acres, while the roots remained firm in the ground. Where the snow remained on the ground, as it did in hollows and uneven land, or where wheat had been sown among corn and the stalks left standing, the wheat lived and produced one of the finest crops ever raised. Many persons, finding the crop dead in the spring, harrowed in spring wheat without plowing, and thus in all instances where it was sown early, obtained a good yield. It is a common and good practice, to sow wheat among corn in this country. It is also a good practice, and almost the only sure one, to plow the ground in the fall for spring wheat, and harrow it in early in the spring as can be done. The reason of this is, that our spring usually opens late, and the surface of the land is too wet to plow, but the seed can be harrowed in, although in the mud.

The surface of the prairie is composed of the fibres of the grass roots, 6 or 8 inches deep, which when rotted by two or three years cultivation, is so soft and friable, that when wet, it much resembles in consistence, wet leached ashes; being as easily displaced when you set your foot upon it, and of course when dry, unless baked together, as it sometimes is in dry weather, it is very easily plowed. When well cultivated it is exceedingly fertile; but how long it will remain so under the "skinning" system, is a problem yet to be solved. My own opinion is, that we might even now, take some useful lessons from some of the manure making farmers of the east.

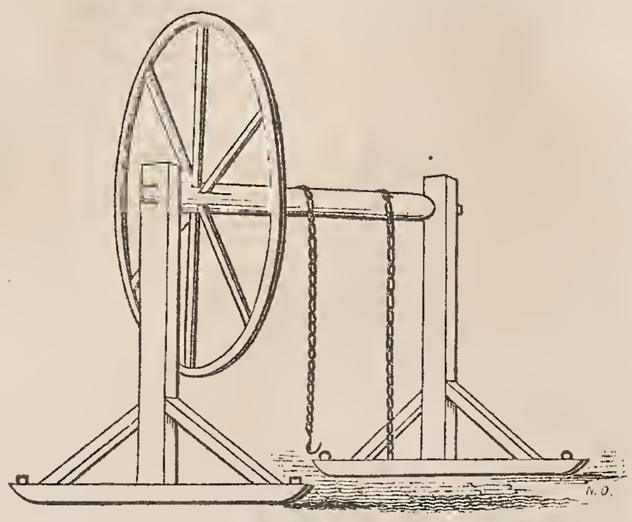
Although we can raise our crops with far less labor and expense than you have shown that you can do, there are but few articles that we can compete with you in your market. The expense of hauling in wagons over a long road, or rather over a long distance void of roads, except such as nature has provided ready made, and the long lake and canal transportation, is a bar to almost all kinds of our produce except wheat. But there is one other product fast coming into fashion here, that we can compete with you, and that is wool: unless our wild and almost insane free trade advocates, shall finally succeed in making this country, as far as all manufactures are concerned, a dependant colony of Great Britain. The prairie region possesses such cheap facilities for wool growing, and the cost of transportation so comparatively small when compared with the value, that you cannot possibly afford to raise wool at the same price, where you manure your land at such an expense as you have stated, or even a tythe of that sum, taking into account an interest of $3 to $6 an acre upon the cost of your land. Here, summer pasturage will cost the attendance of the shepherd and salt used—nothing more—and the winter keeping I can hire done with all proper attention and feed, for 25 cents a head. The great difficulty in the way of western farming, which will continue to increase with the increased productions of grain, will be the cost of transportation to an eastern market; and unless the raising of wool, flax, hemp, silk, and other light articles of value, shall be added to our products, you will grow rich with your expensive manuring system, while we shall barely "hold on," without materially improving our condition or happiness, and undoubtedly our land must deteriorate in fertility. If, and that if is often in the way—if we could ship beef in the late fall or early winter months, we could win your gold for quantity, and golden opinions for quality, for we could well afford to sell the best article for two cents a pound.

Pork can be made to advantage here, but it can be made to much greater advantage farther south, where Indian corn is "the great crop," and grows with such luxuriance as would astonish an eastern man. The Wabash and Erie canal which is now completed, will open an outlet for an immense amount of this article, or the pork grown from it.

If I thought it would be interesting to our mutual readers, I would willingly increase the length of this letter, but my sheet is full, and as in the operations of Tylerism I have lately lost the franking privilege, I must close—for I cannot afford to pay double postage. I hope you will continue the correspondence, until our friend Tucker cries, hold, enough. With sentiments of respect and brotherly kindness to you, and numerous other of my friends and acquaintance made through the columns of the Cultivator, I remain the same

Solon Robinson.

Lake C. H., Ia., Aug. 17, 1843,



STUMP MACHINES.—(Fig. 76.)

Messrs. Gaylord & Tucker—In your excellent paper, I find directions, hints, instruction and information with regard to every subject connected with the scientific practice of agriculture, with one exception, and that no small one for at least the newer portion of our country; and that is the getting rid of stumps. A great part of Vermont, New Hampshire, Maine, the northern part of New-York, and various other sections of the country, are or have been pine plains, where pine stumps are so thick as to render it almost impossible to plow the land, at least with any kind of comfort. In some cases I have counted 200 to the acre. To dig these by hand, is a most laborious and difficult undertaking, and when they are dug, it is no easy task to haul them off, or to burn them, as is sometimes practiced. Besides many roots are necessarily left in the ground to snag the plow, and the poor subsoil is turned up on the surface by the process of digging, leaving (unless afterwards highly manured,) a poor spot wherever there was a stump. Now the object of this communication is to show to your numerous subscribers, an easy, economical and complete way, not only of removing stumps from the land "in toto," but of converting them into excellent fire wood. The accompanying drawing represents a stump machine invented 15 years ago, by two brothers named Manchester, of this place. It is simply the wheel and axle, on a large scale. The uprights should be 11 feet high, 10 by 12 inches square, of hard wood. The sills 7 by 9 inches square, 14 feet long, and turned up at the ends, sled runner fashion, to enable it to slide easily on the ground. Let the posts be firmly morticed into the sills, and well braced. The axle or shaft, should be white oak, ash or maple; 18 inches in diameter, with the gudgeons 8 inches. It should be 20 feet long, and 2 pins should be driven into it, outside the posts, to keep them together. The wheel should be about 18 feet in diameter, with 8 spokes; 4 of which should go through the axle, and the other 4 set as deep as possible into the shaft, without cutting away too much wood, for fear of weakening it. The spokes are to be white oak plank, 8 by 3 inches square. Let the felloes be sawed out of 4 inch plank, and planked by two courses of inch boards on the two sides, in such a manner as to "break joints," (as the phrase is,) with the first set; thus, and at the same time, to form a groove to keep the rope from slipping off. Then get two strong chains made of 1¼ inch iron, and 12 feet long each. Fasten one end of each by a strong staple to the axle, and on the other end of one have a hook, on the other a large link or ring. Then fasten one end of a 1½ inch rope on the wheel, give it two or three turns around it, and your machine is complete. Now bring your two yoke of cattle, and one assistant; hitch them to the staples, (which should be in each end of each sill,) and drive where you like. Dig a hole under the main root of the stump, (on one side if possible,) and pass your chain under it. Hitch your cattle to the end of the rope, and they will draw any stump that ever grew in the ground. Then take off the dirt from the stump with a spade, and it will fall back exactly as it came up, leaving no hole to fill. There will also be no roots left in the ground for future botheration, and the soil which was about the stumps having never been tilled, will be distinguished as good spots instead of bad ones.

Now have an augur made, such as pump borers use *first*, only about four feet long, having a screw like a cork screw at the point. Bore a hole down exactly in the heart of each stump, (for however rotten at the top, they will generally be sound at the junction or knotting together of the roots,) and put down about 3 inches of coarse blasting powder. This will blow the stump to atoms; and you may then convert them by means of your beetle, wedges and axe, into first rate wood for home consumption. Many farmers will not understand blasting, but it is, after a little practice, as safe and simple an operation as any other on the farm. You will want a crowbar, a priming wire of the same length as the auger, a 4 lb. hammer with a handle 5 inches long, and some match paper made into strips 3 inches long and half an inch wide. After your hole is bored, (and be careful not to have it go clear through by a foot or so,) put down your powder. Then put in your wire, which should be made tapering, the small end about one-fourth of an inch in diameter, on one side of the hole. Now fill the hole with pounded brick and damp clay alternately, pounding it down with the small end of the crowbar, and starting the wire every now and then, till it is full. Now draw the wire by putting the small end of the crow bar through the loop in the wire, and striking it up with the hammer, taking great care not to let the least particle of dust fall into the hole. Then fill the hole slowly with powder, apply your match paper, (common wrapping paper steeped in a solution of saltpetre,) touch fire to the end of the match, and take to your heels; and depend upon it, the stump's powers of locomotion will be vastly assisted by this operation. The machine for drawing them will be cumbrous and heavy, but it will be strong, simple and effective. The whole cost of this apparatus will be between 50 and 100 dollars; but it is well worth while for every large farmer, or 3 or 4 small farmers in company, to possess one, wherever stumps occupy the ground. It is enough to say that the machine made and tended by the inventor, has been in constant requisition since that time, (15 years,) and never went at a stump which it did not take up.

I hope this article will not prove too lengthy for your columns, as it is a subject of great importance to hundreds, nay thousands of farmers in New England; for a pine stump is noted for its ugliness, durability, and dogged resolution to throw every obstacle in the way of tilling the ground, and to maintain its position whether or no, till, nolens volens, it has to give up to some such power as this. H. T. C.

Burlington, Vt., Aug. 14, 1843.

PREPARATION OF SEED CORN.

Messrs. Gaylord & Tucker—I observe in the August No. of the Cultivator, a communication over the signature of "H. W. S. C." in which he states that he had been unfortunate in loosing the first planting of his corn, and imputes the failure to the tar used to protect it from birds, &c. Now, Messrs. Editors, I have been in the practice of preparing my seed corn in the same manner he describes, and never had any fail of vegetating until the present year.

On the 19th of May last, I soaked my corn in warm water for twelve hours, with the intention of planting it the next day, but owing to unforeseen occurrences I did not plant it until the 22d. The usual quantity of tar was put into water sufficiently hot to dissolve the water or soften the tar, when the corn was put in and stirred until well covered with tar. It was then rolled with slaked lime and immediately planted.

After waiting sufficient time, I examined and found it had mostly all rotted; many of the kernels were pierced with from two to three wire worms, and only here and there one sprouted. As I was satisfied it would prove a failure, I caused the ground to be thoroughly harrowed and marked out again. Having used all my seed corn, I obtained a variety of eight rowed white corn, which had been cultivated on the Helderberg. It is said to be early and of quick growth, and having been grown at an elevation of some hundred feet above my farm rendered it an object for an experiment.

I soaked it in warm water for twenty-four hours, then dissolved a sufficient quantity of tar in hot water, put in the corn, stirring it until well coated with tar; drained off the water, rolled it in lime and planted again on the first day of June. On the eighth day it made its appearance, and I think I have never seen corn come up better, which convinces me that it was not the tar that caused a failure of the first planting, but was in consequence of the state of the soil, being deficient of heat and moisture. About the time the plants made their appearance, we had warm lowery weather and seasonable showers, which gave a start to vegetation, and I have no recollection of ever noticing so rapid a growth. In sixty days from the time it was planted, it was in flower and the ears set. It is now as forward as corn generally is at this season of the year, when planted at the usual time, from the 15th to the 20th of May, and should the weather be favorable in September, I anticipate a bountiful crop. C. N. Bement.

Three Hills Farm, Aug. 1843.

EXPERIMENT WITH COAL DUST.

Messrs. Gaylord & Tucker—I have made three experiments with coal dust. I will give you the result of one of them. I had an acre of wheat, measured early in January last, on which I put at least 500 bushels of coal dust. In selecting the acre, I took a part of the field that has had no manure for many years. I also took coal dust that was made many years ago, and which, if it retained ammonia, &c. must have been fully impregnated. My object in measuring the land, was to ascertain the increased product produced by the coal dust, and by that means discover whether it would pay the expense of transportation and spreading on the land.

On Saturday, I finished threshing the field containing about seventy acres. A part of the field had been manured three years ago, and another part was manured last winter by top dressing, all of which was free of rust; all the balance of the field was rusted, and I am sorry to say that the acre which had the coal dust, as much so as any part of the field. As to increased product, there was none. The field is now in clover, and I shall hereafter discover whether that acre produces better than the adjoining lands.

I shall still proceed to try more experiments, and may probably write again on the subject. If coal dust should prove to be a valuable manure, to me it would be all-important; for my iron establishments produce it in large quantities, and I should be at no expense but cartage.

Yours, Wm. Weaver.

Buffalo Forge, Rockbridge co., Va., July 24, 1843.

PRODUCTIVE FARMING.

Floreat Agricultura—May agriculture flourish. This wish, this desire cannot be amiss at the present time, when cultivators of the soil cannot find a market for their produce at remunerating prices. Agriculture accordingly languishes, and farmers feel discouraged. But there is no need of despair, for the land produces in abundance, and there is a fairer prospect ahead.

These reflections occurred on receiving from a friend and reading a small 8 vo. of 150 pages, published in New-York, by D. Appleton & Co., 200 Broadway, entitled "PRODUCTIVE FARMING." The author, JOSEPH A. SMITH, informs us that it is a compilation, or "*a familiar digest of the recent discoveries of Liebig, Johnston, Davy, and other celebrated writers on vegetable chemistry.*"—This compilation is an abstract or compendium of the principles laid down by these distinguished agricultural writers, so that the farmer may read in a short time, and at a cheap rate, this small work on "Productive Farming," without the necessity of wading through the larger and more detailed works, from which the author professes to have compiled. This work, though useful, will not supersede the original works of Liebig and others, where farmers are able and willing to purchase them; but "Productive Farming," is adapted to the wants of those who have little money to spare, and less time to read; as the work contains, multum in parvo, or a condensation of several larger works. It is accordingly recommended to all who desire to see agriculture flourish and improve. Book farmers, and practical farmers, those who cultivate large or small farms, may find something useful in the study of this little book.

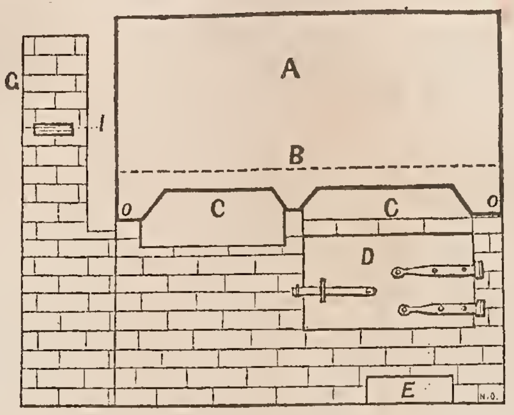
We are glad to see the Appletons, Wiley & Putnam, and other publishers in the book trade, taking hold of works on agriculture. This subject of late is exciting more interest in the community, and farmers are not only turning the soil, but turning the leaves of books, studying the science of the art they cultivate, and becoming better acquainted with the nature of soils, the use and preparation of manures, and the rotation of crops.

There has heretofore been too much apathy among the owners and cultivators of the soil, in regard to the study of agriculture, owing in a great measure to the facility of obtaining new lands at low prices. Hence farms would be cultivated and worn out, and the occupants emigrate to the *west*, where the virgin soil would for a time reward their labors with abundance, without much care or exertion. But good lands will wear out, and by repeated cropping become poor and barren, if no means be employed to renovate them. Such has been the case with many a farm, and the occupants who emigrated from the Atlantic states, have repeatedly pulled up stakes and gone farther west. This process is still going on, and will continue over the wide expanse of the United States. But those who till the land in the old thirteen States, in order to compete with their countrymen beyond the Alleghanies and the *Far West*, must read and study as well as labor. The science of agriculture is replete with instruction, and though agricultural writers may occasionally indulge in unsatisfatory theories, yet among the later authors we find much practical good sense and desirable information.

"Chemistry has rendered many and great services to agriculture, and can render more; the two sciences ought not to be considered as having no relation to each other; on the contrary, practical farming is only conducted on *rational principles* when directed by chemical science. Hitherto it has fallen in with the humor or bias of only a few scientific men to enter upon such inquiries. Sir Humphrey Davy, the greatest chemist of his age, devoted his efforts not only laboriously, but most usefully, to the prosecution of agricultural chemistry; and the recent views and discoveries of Liebig, will do much to economise agricultural operations, as well as to direct the farmer to the easiest and shortest modes of doubling his crops. But generally the appreciation of such efforts, on the part of learned men, has been so small—the reception of scientific results and suggestions by the farming tenantry, so ungracious, that little wonder can exist, that so many have quitted the field in disgust—that the majority of able chemists should studiously avoid it. Hence it has happened that in England, the analysis of soils has rarely been undertaken, except as a matter of professional business."—Productive Farming, p. 144.

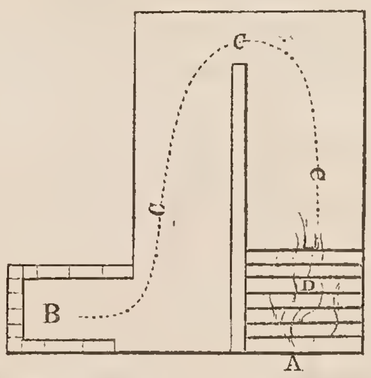
This state of things is undergoing a gradual change for the better in this country and Europe. Our author informs us, p. 145, "that early in the present year, a meeting of landed gentry and farmers took place in Edinburgh, for the express purpose of forming an association *for the application of Chemistry to agriculture;* a tolerably expressive indication of the state of public feeling in Scotland, and one that we trust will be followed up by the organization of kindred institutions throughout the entire kingdom. The great and leading object of the association is to have a chemist of first rate eminence, resident in Edinburgh, who during the winter months, shall devote himself to analysing such soils, manures, and other substances as may be sent him by farmers, and giving them advice regarding their value and usefulness. In summer, he will visit different districts of country, at the request of members of the association, and give a few lectures in the towns, or advice to individuals, regarding the system of management best adapted to different soils. It is easy to see that all this will be attended with very great practical benefits to the country."

In conclusion, we again recommend this little work on "Productive Farming," to the consideration of the agricultural community. **Richmond.**



MR. FERRE'S ROOT STEAMER.—(Fig. 77.)

Messrs. Gaylord & Tucker—As the season for making pork is at hand, and as it is allowed by all judicious feeders, from numerous experiments, that cooking food for fattening swine, is not only the most economical, but also the most expeditious method, I feel in duty bound to lay before the numerous readers of your valuable paper, the plan of a steaming apparatus which I have used the year past to my entire satisfaction. For simplicity of operation, economy in fuel, cheapness of construction, and (I believe,) durability, I have never seen any thing preferable to it. I have substituted a cast iron bottom of a peculiar form, and setting the same in the arch, for the sheet iron bottom to a box, described in a back volume of the Cultivator. I have endeavored by some rough vague marking, (as the draftsman would call it,) to give some idea of the form of the bottom and manner of setting the same. An end view is given; the concave at the end omitted, that its shape may be more readily seen. A. end view of steam box—B. false bottom inside the box, having numerous half inch holes, on which the vegetables to be steamed rest—C. C. underside bottom—D. fire door—E. ash vault—G. chimney—I. damper—O. O. a flange or raised edge around the upper side of the bottom, of a suitable thickness to fill the groove of a common grooving plow. The under edge of the box is grooved and driven on to the raised edge about three-fourths of an inch. The bottom of the one I have in use, is about 4 feet long by 2½ feet wide, and is calculated to steam from 8 to 10 bushels with despatch; it weighs about 110 lbs., but they may be cast of any weight and size, to work 20, 30, or 50 bushels.



Surface view of the bottom.—(Fig. 78.)

This figure shows the course of the fire from the arch on the right hand, to the chimney at the same end of the arch on the left hand side.—A. fire door—B. chimney—C. course of the fire to the chimney—D. grates.

The arch on the right hand side at the grates, is one foot wide, and about the same in height; on the left hand side, next the chimney, 9 inches wide, and the depth of a brick set edgewise, as shown in fig. 77. By this, it may be seen that the fire operates on the bottom between 7 and 8 feet in length, by which (if the damper is properly set,) we save nearly all the heat. A tube is inserted at one corner of the bottom to draw off the water, which to steam 8 bushels, requires about 9 gallons, or one inch deep on the bottom, at the commencement; a small tube or cock in the side of the box, will show at any time, if the water should become exhausted.

The expense of erecting the one I have in use, labor and materials, did not exceed ten dollars. The bottoms cast to order of any size, may be had of Mr. L. Trask, at the south end of Springfield, Mass., near the U. States water shops, who has had some experience in casting the same. For heating water for washing, scalding hogs, or any other purpose, it is very valuable and saves much fuel. Now if my friend in a good cause, Solon Robinson, would adopt the cast iron bottom for his railway steamer, he would have a durable and valuable apparatus I think, and no mistake. As there is no patent, I hope some of our agricultural friends may be benefitted by the improvement.

The drouth has been very severe for some weeks past, but latterly we have had fine rains. Wheat and rye good, oats middling. Hay crop short of last season; late potatoes promise a fair crop. I would recommend planting field beans as a substitute for summer fallow, on light land, for a crop of rye; as I have nearly doubled my crop for three successive years, by taking a crop of beans, and using three pecks of plaster on the beans per acre.

Yours, **Jona. E. Ferre.**

Agawam, Hampden co., Mass., Aug. 16, 1843.

Provoke not, nor be easily provoked—forgive that ye may be easily forgiven.

CLIMATE AND PRODUCTIONS OF THE SOUTH.

Messrs. Gaylord & Tucker—In the Southwestern Farmer of the 4th inst., a paper published at Raymond, in this state, I find, under the head of "Gross Slanders," a short review of a piece from the Farmer's Encyclopedia, on "Effects of climate of the South." I have not seen the Encyclopedia, but presume the S. W. Farmer has given correct extracts; if he has, the writer is unacquainted with the productions of the south, or designedly gives incorrect information. As your paper circulates far and wide, north and south, east and west, I have concluded to give you *facts*, founded on my *own knowledge*, in relation to the productions as well as health of this part of the south, which is situated between 33 and 34 degrees of north latitude, and like the state generally, is *hilly* and broken. I know an opinion prevails that this state is a perfect level flat morass; the reverse is the fact. This opinion is formed from the accounts of steamboat travelers, who judge the *whole* state by the Mississippi river swamps. Even on the river, hills, high peaked and lofty, may be seen, as at Vicksburg, Natchez, &c. I will take a few extracts from the publication first. The writer says:

"Beets, carrots, parsneps, turneps, radishes, and *other roots*, are equally affected by a hot sun, and scarcely worth cultivating to the far south. They all fructify before they have formed perfect roots, and make foliage at the expense of their bulbs: hence they will always be articles of commerce; the *South will have to depend on the North for them.*"

The largest and finest beets, turneps, sweet potatoes, and yams, I have ever seen, are raised in this section of the country in great abundance—beets of the mangel wurtzel kind, weighing from 25 to 30 lbs.; the common red beet measuring from 12 to 15 inches round. I have just stepped into my garden and measured one upwards of 12 inches, and I have seen and raised many *much* larger. Turneps are raised as heavy as the mangel wurtzel. Yams from 18 to 20 inches round, and from 15 to 18 inches long. Irish potatoes as fine and large as *any* I have ever seen from the north. It is thought best to procure the northern potatoe for seed every three or four years, though many think it not necessary. I have never seen any kind of vegetable for table use, come to greater perfection than they do here, (with the exception probably of celery,)—tomatoes, squashes, cornblins, cucumbers, cabbage, peas of all kinds, beans, &c. &c., all and every one as finely flavored, grow as large, and come to perfection in every respect, as well or better than farther north.

In speaking of fruits, &c. he says:

"It is in Pennsylvania, Virginia, Maryland, Jersey, and the north of Europe, that we enjoy them, although originally they came from places near the tropics. The peach of the Carolinas is full of larvæ, gum and knots, and too stringy and forced to be juicy and flavored."

Now, Messrs. Editors, I was raised in Middle Virginia, in the county of Amelia, about 40 miles southwest of Richmond; lived there until I was upwards of fifty-two years of age; have seen, tasted and enjoyed the fruits of Virginia from my boyhood to old age; and whilst I have the very strongest attachment for the Old State, (God bless her,) and for every thing relating to it, and strong partialities too, truth compels me to say that the peach of this part of the south, (which is in the same degree of latitude as about the middle of South Carolina,) is far, very far superior to the peach of Virginia. "The southern peach full of knots, and stringy and not juicy!!" Why, Messrs. Editors, a strange "coincidence" happened whilst reading the piece in the S. W. Farmer; just as I came to that part speaking of peaches, my brother's wife handed me a waiter full; they looked so enticing I put the paper by, and was obliged to spread my handkerchief in my lap to prevent the juice dropping on the floor whilst peeling them; the best peaches when fully ripe, are nearly as juicy as an orange; this year, owing to the cold backward spring, the fruit is not as large as usual, but I picked from the same waiter one and measured it. It measured eight and a half inches round. I have seen many larger.

Again he says:—"The changeableness of the weather at the south in the spring season, throws plants off their guard; the frosts attendant on these changes destroy the young fruit, and it is only one year in three the crop hits at all." This *is not so.* I have resided where I do for upwards of four years, and have never known the peach crop fail; true, we have fewer this year than usual, but plenty to eat, preserve and dry. The peach will bear in three years from planting the stone, if well cultivated. I brought from Virginia, peach stones, and planted them in the spring of '39. Last year, '42, they bore a few fine plump juicy peaches.

Again, in speaking of melons, he says:—"The forcing sun hurries them on to maturity before they have attained much size, or acquired that rich saccharine and aromatic flavor for which they are so much esteemed. The Cantelope melon will rot or have its sides baked by a hot sun, before it is fully formed; and the watermelon is always woody, dry, and devoid of its peculiar sweetness and richness at the south. Vines have been known to run a hundred feet and bear no melons. It is in Philadelphia and its neighborhood," &c. &c. The melons of the south are larger—(have been known to weigh 50 lbs., often upwards of 30 lbs.)—are as juicy and as finely flavored as I have ever seen any where—are raised with more ease and greater abundance than farther north. If you, Messrs. Editors, were here now to partake of some of the fine, long, juicy, red meat, ice rind watermelons, and the delicious finely flavored juicy musk melon, of the nutmeg and pine apple kind, from seed from Old Virginia, I know you would give evidence strongly for the south, and declare, as well you might, you never saw the like at the north.

Erroneous opinions prevail at the north in relation to the health of the south, to as great or probably greater extent than on any other subject. On the Mississippi and other *river swamps*, the people are not healthy, though those who reside there are not willing to acknowledge it, but the truth is they are subject to ague, and billious, and sometimes congestive fever; and during three or four months of the summer and fall, I would be unwilling to risk my health in such situations; but even there, as the country is cleared up and drained, they will be more healthy. Those residing on the Mississippi river for 100 or 200 miles above New Orleans, are said to be healthy; I do not know the fact of my own knowledge, but I *do know* that those living off the river bottoms enjoy generally good health.

I know of no better way of giving a correct idea of this part of the country, than to give an account of my own place and family, which I believe is a fair specimen of the general health of the country. My plantation is situated on a tolerably large creek, (Perry's,) running from N. to S. through it, for upwards of a mile and a half; the houses situated in a grove of 12 to 15 acres, about half a mile from the creek, west. West and south west of the creek, high hills or mountains running for about two miles; the land is cleared from the creek to those hills, which is about three-fourths of a mile. From the hills to the creek, with the exception of the grove about the houses, the land is in cultivation, (about 600 acres or over.) In the year 1835, this place was settled by my brother and myself, with our negroes and a manager; but I did not move from Virginia with my family, until the fall of '38, when I took charge of the plantation myself. My white family number from six to eight, and one or two years, including my overseer's family, as high as 15 or 16. My negroes between 70 and 80. Up to this time, there has been no death in my white family, and but three cases of serious sickness; only three deaths from *disease* amongst my negroes, from the year 1835, one adult and two children, (one of the children was diseased before it moved here;) and two young babies have died from the carelessness of their mothers smothering them during the night. During the months of July and August, there are occasionally billious attacks among the negroes, though they generally yield to medicine in a few days. I consider this climate decidedly *more healthy for negroes* than Virginia, and more healthy for whites from 1st October to June, as we have no winter fevers; but from the middle of June to October, more subject to bilious fever than Virginia, above tide water; but during those months nothing like as sickly as Virginia, *below tide water*. Those who are much exposed to the sun and dews here, are more apt to be attacked than those who are not. The ladies, I consider healthy all the year round. The people are generally rosy and robust, and beyond all doubt the most prolific country I have ever seen. If those who travel to the south, would quit the rivers and stage roads and come amongst us, and visit us *at our homes* on our plantations, and see our hills as well as our valleys, and become *acquainted with us, our fruits and productions of all kinds*,—lay aside all prejudice, *we nor our fruits* would be slandered. But a prejudiced, one-sided fellow from Europe or the North, takes stages and steamboats—rattles and steams through the country—judges of the people from the loafers at the little towns—the country from the river swamps, and returns perfectly satisfied that he entertained correct opinions of us and our country when he started—publishes his "Notes," &c. and proves to all who know no better, that "corn will grow thirty feet high and bear no ears,"—"vines run 100 feet and bear no melons," and what they may bear "dry and tasteless,'—peach trees bear only once in three years, and then the fruit is "knotty and dry," and many other things equally as absurd and false.

I fear, Messrs. Editors, I have run out the *fruits* of my labor much longer than you are willing to read, much more to print. Yet I cannot conclude without saying something of our crops. In this county, the cotton crop *now* is very fine, but in danger from running too much to *weed;* a wet September, the crop will be ruined—dry from this to 1st of October, the crop will be fine. Corn crops tolerably good; new crop offering for 25 cents per bushel. The cotton crop in the lower part of this state, and in part of Louisiana, said not to be good, though I do not know it of my own knowledge.

J. T. LEIGH.

Yelabusha co., Miss., Aug. 12, 1843.

DEBT THE FARMER'S MASTER.

MESSRS. GAYLORD & TUCKER—I have been favorably situated the last 15 years, to see and know much of the ways and doings of the farmers and planters around me, and am well convinced they are a class that flatter themselves much, dull students in the study and practice of economy, fast and liberal buyers on credit, but slow payers. There are honorable exceptions to this rule, whose cash or punctuality, makes the trader his obsequious and humble servant.) The farmer sows his seed, plans, pitches his crop, makes his calculation in his favorite rule, multiplication, (not having cyphered as far as subtraction;) being all fixed off, he goes to the merchant, calls for and buys upon the hopes of his ungerminated seed, to be paid for at harvesting; the price he frequently objects to, but it rarely prevents his purchasing. The trader thinking in the meanwhile, of insects, flies, worms, two and four footed varmints, mildew, rust and bad weather; his figures too work in subtraction, adds another enemy in the shape of a long profit, to the number.

If we examine the business of unlimited credit and large percentage, how often or invariably do we find the ruinous effects to both, but more extensively to the farmer; and then for "foreclosing." What a sad tale to be told of a class that should be the most happy, most independent of all others; and yet how is it with us now? no better than in years gone by; 1 in 50 may pay as they purchase; 1 in 100 hardly punctual to the day, or 1 in 500 holding nothing but their own, and paying down as they receive. Farmers generally toil and labor more incessantly than other people, if not as hard as negroes and colliers, yet more diligently, with often no success at all.

You may rely on it, farmers, and see to it, that this buying on time is not to your interest, should you not have to pay interest. Did you ever see how the cash exhibited by a buyer, controls the seller, and how cheap he works, comes down in his price, and so very polite withal. Then be convinced it is for the good of both to exchange cash for goods, and save the expense of paying the merchant for a day book and ledger, and being your book keeper; he will not foot up your account for nothing, but ask and demand his price. D. G. WEEMS.

Tracey's Landing, Md., 1843.

BEES AND BEE-HIVES.

EDITORS OF THE CULTIVATOR—The communication on the subject of bee-hives in your August number, signed "N. of Worthington," is, I think, calculated to convey to your readers a wrong impression, where he says "it can be used gratis," (meaning, if I understand him,) without infringing on any patent right. If he is a reader of the Cultivator, he may not have forgotten a hive called the Perfect Hive, figured and described in your May number, having precisely such a bottom board as his, and on which a patent has been obtained.* He also says he has had in use the Vermont hive. Now he knows, or should know, that Mr. Weeks obtained a patent on a suspended bottom board of whatever form constructed, (and on his "gratis" hive the bottom is suspended.) Perhaps some of the many patentees might wish to say a word about this "gratis" hive; and now one word as to my own experience. The first improved hive I used was the Charlieshope, and at that time it was quite an improvement on the old box. There were, however, objections, such as the expense of making and suspending it; but the greatest was, connecting the bottom board to the body by a common door butt, thus forming across the backside, a joint where worms would always find a hiding place.

When the Vermont hive was introduced by Mr. Weeks, with the suspended bottom, I purchased the right to use, and was much pleased with it on trial, so far as the worms were concerned; but still the expense of constructing and suspending remained the same as in the Charlieshope.

I have also used Webb's patent, but have never found any to equal the Perfect Hive mentioned above and described in the Cultivator as above. The form is simple, the cost trifling, which is quite an item; and being in form similar to the old box hive, will stand where you choose to place it, (saving the expense of stands on which to hang it;) and as the body is raised half an inch above the bottom by means of the hinges attached to it, the bees protect themselves from the worms without difficulty.

Supposing your readers, like myself, are pleased with facts stated, instead of theory, I will venture to give you a short history of one of my swarms of bees this season. To all appearance they wintered as well as the others; but when the working season came they remained idle; no bees or very few were seen, and those few that did venture out, returned in most cases without anything. The hive in which they were, was so constructed with glass, that I could expose to view almost the entire front and side. The bees remained in this inactive state until the middle of July. So few were going and returning, no one without watching the hive, would have suspected there was a swarm in it. The comb was so constructed in the hive, that on opening the front, the cells were exposed to view from top to bottom, which was near 20 inches. Early in the spring, the cells in this sheet of comb were empty, and thus they remained until within a short time, without having deposited in them a single egg or particle of honey. No bees were seen on the front comb, but on opening the side of the hive, a very fair number could be seen in the back part, where they remained stationary. I concluded that as they would not work in the season of honey, neither would they eat after that season was passed. However, the difficulty in the case was what I was searching for; and after repeated examinations I could discover no drones in the hive, and concluded I would introduce some—though I was told the bees would destroy them as fast as I put them in. I took from another hive, say 25, put them in through a ventilator near the top. I could not on that or any subsequent day, discover any dead drones under or around the hive, and I presume they did not kill them. And now the result, you will say. Not ten days were gone before there was a marked change in the hive for the better; the bees were beginning to be more active, and it has gone on increasing from day to day until now, five weeks from that time, the swarm appears perhaps as well as any I have. The empty comb is fast filling with honey, and I have now no fears but it will be full for winter and prove a good strong healthy swarm. Yours,

Nashua, N. H., 8 *mo.* 21, 1843. N. OF NASHUA.

APPLICATION OF MANURE.

THE writer of the following paper informs us in a note, that it was written for the Cultivator immediately after the appearance of Mr. Garnett's paper on manures, to which it refers, (for this paper, see vol. VI, page 104,) but was mislaid and forgotten, until he saw the request of Mr. Armstrong in relation to this subject, in a late no. of the Cultivator. After some just remarks on the necessity of greater precision and accuracy in statements intended for the public, and acknowledging the pleasure and instruction he had derived from the writings of Mr. Garnett, he proceeds to the article of Mr. G. to which allusion has been made.

"The object of the communication is to prove that the *surface application* of manures is the best. To prove this the writer states the following experiment:

"I began penning my cattle late in the spring, and continued it until frost, in pens of the same size, moved at regular intervals of time, and containing the same number of cattle during the whole period. These pens were alternately plowed and left unplowed, until the following spring, when all were planted in corn, immediately followed by wheat. The superiority of both crops on all the pens which had remained unplowed for so many months, after the cattle had manured them, was just as distinctly marked as if the dividing fences had remained standing." From this, Mr. G. infers that it is "*best to apply manure on the surface of the land.*" If the experiment proves any thing to my mind, it proves quite the reverse of the above inference.

In the early part of his communication, Mr. G. says: "Some thirty-five or forty years ago, I had adopted, but without examination, the notion then most common amongst us, that it was best to let all putrescent manures be well rotted first, and next to bury them deep, either by the plow, spade or hoe." This notion, however, with him, and some of his neighbors, has happily become exploded. Permit me to ask, if suffering manure to lie exposed to the alternate sunshine and rain of a long summer, and through the following winter, is not a pretty effectual method of bringing it into a state that may with propriety be termed "*well rotted;*" and in this condition, Mr. G. caused it to "be buried by the plow." But it may be replied that the fertilizing qualities of the manure thus exposed, had been absorbed by the surface of the earth. This, however, with the manure "well rotted," by Mr. G.'s process, was placed at the bottom, that is, "*buried;*" so that take it in what light you please, it appears to me that the experiment as clearly proves that "burying by the plow," "well rotted manure," is the best mode of producing a crop, as it does that the surface application is "the best."

Again,—let us look at the other part of Mr. G.'s experiment, which he thinks proves that "burying manure," is not useful. This too, I contend, proves, if any thing, the reverse of what he claims. The pens which were first plowed, were, I presume, plowed again when he put his seed in, though he does not say so; and theren is *inaccurate* in his detail. I take it for granted, however, that he did plow the second time; if so, did he not bury his manure in a fresh state, and suffer it to remain there until it had become "well rotted," and then by the second plowing to receive the seed, turn it, together with that part of the earth most liable to become fertilized by the decomposition of the manure, up to the surface, to receive the seed? If he did not plow the second time, that may sufficiently account for his not getting as good a crop as he did upon those parts plowed when the seed was put in.

Understanding however, that all the fields were plowed together at the time of planting, is it not apparent from the experiment, that in those "pens" in which Mr. G. supposed he applied the manure to the surface, he actually "buried" it—and in those where he supposed he "buried" it, was in fact, at the time of planting on the surface?

In what I have said, I do not mean to intimate an opinion for or against the surface application of manure. I am not a farmer of sufficient experience and reading, to give an opinion upon such a subject. I merely wished to show the grounds upon which I complained that the experiment was to my mind unsatisfactory.

Before closing my letter, already too long, permit me to allude to one of Mr. G.'s proofs that the "gas," or that portion of manure taken from it by the process of evaporation, is not lost, but is "immediately given by the atmosphere to the tops of plants, as more suitable to them than to the roots."

He says that on taking the bark off from the bodies of certain young trees, in a ring about three inches wide, to his surprise, during the first year or two, the part of the body above the ring, became obviously larger than the part below, and that this difference increased every year afterwards.

I make no great pretensions to a knowledge of physiology, either animal or vegetable, but I had always understood that the sap, or that fluid of a plant from which it derives its chief nutriment, circulated in a manner corresponding in some measure to the circulation of the blood in the animal system. That it passed up from the root, being derived from the earth, through that entire part of the woody substance of the plant, called commonly the "sap part," and which answers to the arteries of the animal system, and returns through the bark, which answers to the veins. Now if the bark is separated, or a "ring" of it taken off, the sap will pass up, but is prevented from returning; that is, an unnatural quantity of that fluid from which the tree derives its support, is retained in the branch above the ring—the effect of which is to swell it to an unnatural size—an experiment, by the way, very injurious in the end to the tree.

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*It is due to "N. of Worthington," to say that his communication was received in February last. Of course it was written long before he could have seen the description of the "Perfect Bee-Hive," published in May.—EDS.

A Yankee Farmer.

SIXTEEN QUERIES ANSWERED.

Messrs. Editors—I know that you are often troubled with queries propounded to you, which you deem entirely useless; yet, as the chief value of an agricultural paper consists in its affording a medium by which we can suggest our difficulties, and by which we can have them resolved, I beg that you will arm yourselves with all your patience, and that you will answer the following questions for me, or have them answered by some of your correspondents:

1. It has been stated that if the blossom on one kind of fruit tree be not impregnated by the pollen from another kind, the seed from that tree will all produce trees bearing the same kind of fruit. Does not this rebut the theory of botanists, that all kinds of the apple originated from the crab? There must have been a time when there was no kind of apple but the crab, and if it require the intermixture of two kinds to effect a variety, how could another kind originate from the crab alone?

2. What is the best and simplest mode of making rat proof meat houses?

3. Can sap wood be rendered durable by being coated with pitch; and if so, how should it be applied?

4. Can potatoes be kept without sprouting in the spring, until the new crop is ready for the table?

5. I have some carrots from seed sown this spring, now going to seed. What is the reason?

6. Asparagus being a vegetable whose roots do not penetrate deeply, would it not be better to plant it shallow instead of trenching for it?

7. Can sheep be folded without injury to them, in the summer? If they can, it would afford a fine supply of manure?

8. Which is the best kind of grass for yards and garden walks? When, how, and in what quantities should it be sown, and how should the soil be treated where that pest the white clover has shown itself? Will not ashes and plaster, which stimulate the grass sown on the yard and garden walks, equally stimulate the white clover?

9. My turkies never having laid eggs enough to set them with, can they be made to lay when they show a disposition to set, by being confined, as hens sometimes are?

10. In your replies to poultry inquirers, you observe that eggs intended for setting, should be as fresh as possible, and that keeping them in any manner injures them as setting eggs. Now it happened with me this spring, that not having turkey eggs enough at any given time, I had to wait some weeks before I could obtain enough. Could they in such case, be kept in salt, if intended for setting, and how long would they be good? Moreover, eggs are sometimes laid in intensely cold weather, when if exposed for one day, they would be too much chilled.

11. You observe that limestone gravel is good for them. Is not lime in any form equally good, whether slaked or unslaked, or in the form of old mortar?

12. Some think that the first offspring of animals is generally smaller than the subsequent offspring, and therefore that it should not be reserved for breeding from. In the case of poultry, I know the egg from pullets is smaller than from older fowls, and I suppose, of course, the chick is smaller also; but my experience does not enable me to say whether the above theory is right or not. What think you?

13. Fowls are said to decline after the age of 3 years. Can they, if old, be made tender and fit for the table by being fattened?

14. Some think that the eggs of ducks and geese will not hatch well, unless kept moist by making their nests on the ground, or unless they are occasionally moistened. Is it not an erroneous opinion, and should not all eggs be kept as dry as possible? Should boxes for nests be made without plank bottoms, and so that the hay or straw forming the nest should rest directly on the ground?

15. Should the thread by which grafts are bound, be untied during the first year of their growth, and if so, at what time?

16. Does the strawberry bear the male and female organs on the same plant; and if not, how are the different sexes to be distinguished, and in what proportions should the sexes be planted? There is a diversity of opinion about this matter. I have always thought that the same plant produced both sexes.

A Subscriber.

Liberty Mills, Va., 1843.

1. The change which takes place in plants, fruits, &c. is based on what are called the "sports of plants," in which some new quality is accidentally developed, and then by cultivation becomes fixed and permanent. As a general rule, the seed of any plant will reproduce itself unless affected by crosses, and this power is limited; but the accidental development of new forms and qualities, gives the means of increasing the varieties without number. A full and beautiful explanation of the manner in which this is brought about, may be found in Prof. Lindley's Theory of Horticulture, page 281.

2. A satisfactory answer to this query, will be found in the communication of "A. B. N." in this number.

3. Sap wood can never be rendered as durable as heart wood, as it is not perfect or matured. Its durability may be increased by covering it with a coating of pitch, which should be applied hot, so as to penetrate the pores as much as possible.

4. If sprouts are allowed to remain on potatoes in the spring, they soon become worthless, as the roots from these sprouts will soon penetrate the tuber in every direction. The tuber is the natural supply of food provided for the nourishment of the young plant, and the real roots from the shoots soon avail themselves of it.

5. Carrots seem at times disposed to run up to seed the first season. We know no cause for this. The season, the soil, or the seed, may all tend to produce this result. The injury is rarely extensive from this source.

6. Asparagus roots *do* eventually penetrate to a great depth, and that is the reason why the soil should be proportionably deep and rich. As the roots are not to be removed, it is the more necessary the ground should be well prepared in the outset.

7. Sheep cannot be safely folded in hot weather. To attempt it, would be to renew the scenes of the Black Hole at Calcutta. Sheep may be driven at night upon fallows where their manure is wanted, but they must always have room and fresh air, or fatal diseases will ensue.

8. We know of no grass sufficiently fine and close for a good turf naturally; and almost any of them will make a smooth close turf when sown thick on a good soil, and kept close by repeated mowings or clippings. Where plaster is used, it is almost impossible to keep out white clover, and where this is not wanted, dressings of fine garden mold compost, well raked in, will be better than plaster.

9. We have not been in the habit of rearing turkies. Will some of our correspondents who are acquainted with the habits of this fine domestic bird, reply to this query?

10. Eggs can be kept for months, and yet hatch with great certainty, if preserved at a medium temperature, or one equally avoiding extremes of heat and cold during the time. Experience, with us, shows however, that in spite of all care, new eggs, and those exposed to the fewest changes of temperature, will hatch better, and produce more healthy and vigorous young, than eggs kept for any considerable time.

11. Lime in any form is good for fowls; and particularly if given in the form of old mortar. We prefer limestone gravel, because fowls find in it the materials necessary for grinding their food.

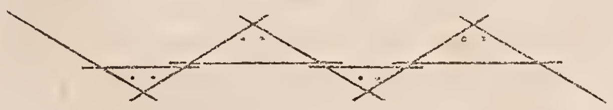
12. There seems to be some good reason for the opinion adverted to by "A Subscriber." Maturity seems as necessary for the perfection of reproduction in animals as in plants. The imperfection arising from first offspring, is perhaps more obvious in swine, than other animals; perhaps from the fact that they are capable of reproduction earlier than most others.

13. No old fowl can be made fit for the table, or tender, by being fattened. Our correspondent can easily satisfy himself on this point.

14. All eggs hatch better for being kept dry, and at a uniform temperature. Geese and ducks go from the water to their nests, but the eggs do not hatch in consequence of this wetting, but in spite of it. Eggs of these birds hatch better when they have access to water, as their animal heat or health is depending on this. It is better to give a sufficient depth of straw, than to have the eggs lie on a plank, or on the ground.

15. All fastenings used in budding or grafting, should be unloosed as soon as the union of the parts is complete. This is more necessary to be attended to in budding, than in grafting, where wax or clay is used instead of strings or bark.

16. In most cases, the male and female organs of the strawberry are so distributed in each blossom, that there is no difficulty in the production of fruit. In some of the varieties produced by cultivation, however, this is not the case, and unless the difficulty is remedied in the selection of plants, a whole bed may be barren. The fertile flowers may be ascertained by their possessing both the stamens and pistil. Where these are deficient, the difficulty must be remedied by choosing different plants.



RAIL FENCE.—(Fig. 79.)

Messrs. Gaylord & Tucker—This cut gives you the plan of a rail fence, constructed in this part, which we consider *wind* and *hurricane* proof.

There are many places on nearly all farms, where a *common* fence will stand but a short season, on account of the bleakness or great exposure to driving winds, which often remove a fence almost bodily from the foundation, scattering the rails hither and thither, for rods, and thus affording an easy ingress for stock, into fields of grain, or opening the way unto forbidden ground.

Now what is the *primary requisite* in constructing fence, and what the *primary object?* Why, most unquestionably, *stability and firmness*, and to *prevent stock from destroying crops*.

If a farmer has poor fences, which are not sufficiently substantial to withstand the fury and force of wind and animals, however assiduous in labor, and judicious and frugal he may be in his management, if he has the consciousness that he cannot resign himself at night, into the gentle embrace of sweet *Somnus*, because of the danger of his stock destroying the reward of his toil, he had better "hang up the fiddle," discontinue all other business until the source of this unceasing vexation is cut off—until he can enjoy that tranquility of mind which ought to characterize every cultivator of the soil.

This fence is constructed precisely like the common rail fence, until it is eight rails high, (higher if necessary,) and then rails or poles are laid on the top, extending from the middle of one panel to another. Stakes are then set in the ground close to the bottom rail, in each crook or corner, inclining into the corner formed by the top rail and the pole. The small dots in the cut represent the stakes; and farther description is deemed unnecessary.

You will readily perceive that it will be a hard matter for the wind to overthrow such a fence on the reaction of the rails, poles and stakes; and ere it can be removed, a great force must be applied. And furthermore, it does not occupy as much space as the common stake and rider fence; and if riders are laid on these stakes, its stability is exceedingly augmented. Such fence is generally made for the sake of economy; and it is the only fence which should be made in bleak situations, especially between farms on the line. For nothing has a greater tendency to perpetuate the peace and harmony of neighbors, in one respect, than maintaining a good line fence. And it is far more advisable to hallucinate by building a little too high and firm, than too low and tottering. Above all, poor fences should ever be avoided: for nothing is so productive of mischief and of incalculable evil. By them, the farmer too often sustains many great losses; and that too, in various ways. By depending on them, he loses his time, his labor, remuneration for his labor—his stock become unruly—neighbors are set at variance—detestable animosity is aroused—restitution appeals to the hand of justice—and then, *hurrah for litigation!* Yours, S. E. T.

Lansing, Tompkins co., N. Y., 1843.

WINTERING CATTLE.

Messrs. Gaylord & Tucker—I believe it is the doctrine of your most excellent paper, that the wintering of cattle is best accomplished by having them confined to good warm dry yards during the day, and at night to stalls and stables, kept clean, well ventilated and littered. I know not, indeed, but I may say without fear of contradiction, that such is the opinion of every agricultural paper, and also of every enlightened agriculturist in this or any other cold climate. Taking the fact therefore for granted, I am utterly at loss to conceive how the practice, almost universally prevailing in this section of country, should continue, of allowing cattle during winter to feed at stacks in open fields, unprotected from winds or storms, and allowed to ramble at large upon highways frequently, at some distance for water, to the incommoding of travelers, and imminent danger to the poor beasts themselves. If such a method of wintering stock is best for them, and most profitable for the owners: and it must be they think so, and are well convinced of it, or surely they would not go on from year to year, in the same way, "unvarying and unvaried." If then, the practice adopted, (I may almost say universally,) is the most correct, economical and *humane*, and tends to produce the finest animals, and enrich the owner to a greater extent than the contrary, the system is brought to perfection among us; for you can see the complete exemplification of it every day, of the poor cattle marching and countermarching in single files, from the stack to the brook, and back again, halting occasionally behind a fence or sunny side of a snow bank, to reflect on the beauties and *comfort* of their "unhoused free condition," and regret that the days of "sweet summer" are coming again, when they will be debarred the glorious privilege of roaming free as the winds that whistle around their unsheltered heads, and be pent up within the enclosure of a single field. Such an *economical* free wintering, without *care or trouble*, generally gives to cattle a *remarkable* fine glossy coat and mellow skin, and fleshy, or rather fleshless bodies in the spring.

If, Messrs. Editors, the above described method of keeping cattle through the winter, is the best, and the almost universal practice proves it, then I think you must fairly be convicted of heresy in this particular; and any more "pictorial illustrations" of barns, sheds, stables, stalls, and all the appliances for feeding stock profitably and economically, and all those excellent essays from yourselves and correspondents, on the necessity of increasing the quantity of manure by the proper construction of barns and barnyards, ought immediately "to cease and determine." There are many, I know, who maintain that cattle to be well wintered need only to have plenty to eat, and that stabling or sheltering them is all moonshine; and besides it is so much *trouble*, they can't think of it. I am inclined to think this free wintering system will do best for a large farmer, who has plenty of forage to waste; but for one who wishes to make the most of his supply of winter keep, the confining them to good yards during the day, and at night tie them up in good warm stalls with plenty of dry litter, will much better subserve his purpose. The extra trouble will be more than compensated, by the excellence and quantity of manure, and the thrifty and contented appearance of his stock.

I have written this to elicit some remarks from yourselves on the subject, which I consider of vital importance to us farmers in this country of long winters, and not with the expectation that you will deem it worthy of an insertion in your excellent paper.

Clinton, Dutchess co., April 15, 1843. P.

WHEAT CULTURE IN ALBANY.

Messrs. Gaylord & Tucker—As you encourage the cultivators of the soil to publish the results of their efforts, I take the liberty of mentioning a small experiment in raising winter wheat on Patroon street, about a mile and a half from the capitol. About the 12th of October last, I sowed half an acre and 14 rods on ground which had been planted with potatoes. The seed sown was about a bushel and a half, rolled in plaster. The ground was plowed but once, but was well dragged. No manure was put on it after the potatoes were gathered. The crop has been lately gathered, threshed and cleaned, and the produce is 21 bushels of clean plump wheat, or 37½ bushels to the acre. The whole expense may be estimated as follows:

Plowing and dragging,	$2.50
Seed,	1.50
Harvesting,	2.00
Threshing and cleaning,	2.50
Amount of expenses,	$8.50
Produce of wheat,	$21.00
Straw,	2.00
	$23.00
Deduct expenses,	8.50
Leaving a profit of	$14.50

The principal error consisted in sowing too much seed. If one-third or one-half less had been sown, I am convinced a much better result would have been produced. The soil is clay, and I think the experiment proves that the clay lands in the vicinity of this city may be made highly productive as well as ornamental, by a proper culture. Indeed, there are vacant lands, or lands imperfectly cultivated, within three miles of Albany, which, if rightly managed would support one-third of its population. Yours, &c. A. B.

Albany, Aug., 1843.

BREEDING—FEEDING CALVES, &c.

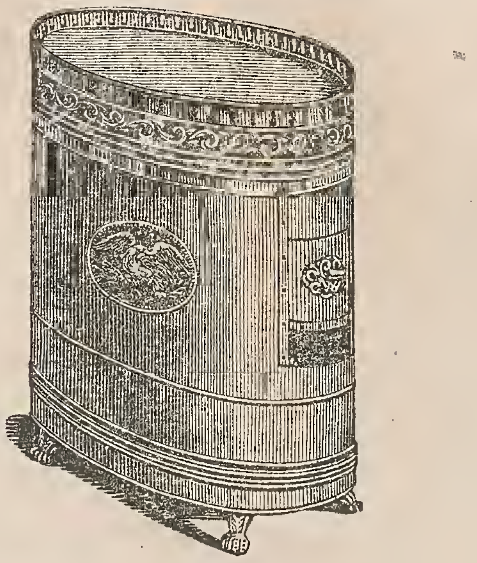
Messrs. Gaylord & Tucker—I see by the August No. of the American Agriculturist, and the last number of your paper, that a controversey has commenced on "*breeding*." This I hope will be carried on in friendship and good feeling, for it is a subject that will render much benefit to the country. Able and united opinions, given cheerfully, candidly and liberally, must enlighten those who read, and stir up the spirit of those who advance them; therefore I give all speed to your labor, and will join in the effort with good nature, as soon as an opportunity offers, and you are settled down to cool argument. In the meantime, I will give Mr. J. W. Smith, the desired information he solicits on my system of feeding calves.

I have a small boiler that contains about thirty gallons of water; I put in about twenty-five gallons, and about twelve quarts of linseed; keeping it well stirred, to prevent burning at the bottom, whilst boiling over a "slow fire," for two hours. As soon as the oil is sufficiently extracted from the seed, I strain it through a sieve, and when cold it becomes a thick jelly. The same boiler is about half filled with water, and a large tin warmer about two inches smaller in circumference, (with two side handles to lift in and out,) in which I heat the milk, adding a fifth jelly; the water between the two vessels prevents the milk from burning, which is a great injury to calves. I gave it then about the same warmth as from the cow, morning and evening, and they did very well; should they scour, give them a small ball of mutton suet, or part of a tallow candle, and it will stop it at once.

Allow me to tell you that I have had a number of breeders from all parts of the United States to view the Herefords, and most of them say they are agreeably disappointed; they expected to see from the accounts they hear and read of them, coarse plain animals. Now, Mr. Editor, I will place them in a *position for proof*. I will show six or ten breeding cows and a bull, all *pure Herefords*, against the same number of *any breed*, from any herd in the United States, for beauty, symmetry, quality, milking, and activity for breeding working oxen, for a silver tankard, value fifty dollars, and meet half way between the acceptor. I do this to defend, and not to "*brag*." I will leave this challenge open for one year. On the first of January, I will give you a statement of the butter made from fourteen cows, but it will not be an accurate one. I have sold cream, cream cheese, and new milk, of which I have not kept any account. I will give you the actual weight of the butter made, but it will not come up to some of the statements of your correspondents. I shall have several excuses to make this year, but next year shall be a fair trial.

Hereford Hall, Sept. 15, 1843. Wm. H. Sotham.

Clover at the South.—It has long been supposed by many, that clover could not be grown in the south, the climate being too hot and dry for the plant. A Mr. Rose, however, in a late no. of the Southern Planter, controverts this position successfully, and from his own experience. The difficulty seems to have been sowing the seeds in the spring, when they would germinate, but perish during the hot summer. He sows the first week in October, and even earlier, preferring a stiff clay soil, as he has not succeeded on light sandy ones. One piece of red clover sown by him, was cut six years in succession, the last five years for seed.



ORR'S AIR TIGHT STOVE.—(Fig. 80.)

Messrs. Gaylord & Tucker—Having experienced in my own establishment, the comforts and advantages arising from the use of the air tight stove, I am desirous of fulfilling the injunction of the Holy Book, in "doing good," by communicating through the pages of your widely circulating journal, a knowledge of that invaluable appendage to our household arrangements. To this end, I have procured from the agent for the manufacture of these stoves in Philadelphia, W. W. Hughes, 45 Walnut st., a stereotype cast of this very neat and elegant parlor stove, an impression from which I should be pleased to see transfered to your columns, that the knowledge of it may be extended from "Maine to Georgia;" it being, in fact, as well adapted for the south as for the north; the facility of *diminishing* the heat, being as great as for *increasing* it, fitting it equally for both. Indeed, the value of it cannot be apprehended but by experience; I can therefore only say with my friend Mr. B. Cooper of Camden, "I would not be without one for ten times its cost."

Before using, it will be necessary for the protection of the stove, to spread about two or three inches of wood ashes over the bottom, and upon this place the wood; the fire is regulated by raising or lowering the door, the smallest aperture being sufficient for a strong draft; a valve in the smoke pipe facilitates the arrangements, by giving the power to extinguish the fire almost instantaneously when desired. With regard to the actual consumption of wood, much must of course depend upon the degree of heat required, as also upon the size or number of the apartments to be warmed; but to say that the quantity might be reduced to one quarter part, under any circumstance, is, I conceive, far below the mark. Nor is this consideration *one quarter part* its real value; for, as has elsewhere been said,*—"The price of the air tight stove might be saved in the difference in the cost of fuel in one winter; but the convenience, cleanliness, comfort, and *consolation* arising from having at all times, by night as well as by day, just so much heat and no more, as you desire, and all regulated in an instant, by merely turning off or on the draft by the finger and thumb, are justly inconceivable, and not to be appreciated but by experience. The fire is made up in the morning by supplying half a dozen short billets of wood; and no more will be required, under ordinary circumstances, for twenty-four hours, or perhaps more; the stove being closed on retiring for the night, during which the process of *charring* goes on, but no flaming. I am tempted to say, I closed tight the door of my stove at 10 o'clock last night, and having occasion to rise at three this morning preparatory for a journey, I found the atmosphere of the room 70 degrees of heat by the thermometer at the farthest part from the fire; and by raising the draft half an inch, I increased it to a degree that quite surprised me. I calculate that one-tenth part of the wood required to heat a room by burning in the open chimney, will be more than sufficient to keep the same room at the same temperature, by means of the air tight stove. And then, the convenience of having to light the fire but once during the winter; and taking from the stove in the morning, charcoal for lighting the other fires in the house, will render it the most profitable, as well as the most desirable, of all the numerous contrivances that have come down to us in the shape of about 500 varieties of stoves of all sizes, shapes and prices. And then, the very prevalent complaint of bronchitis, will, I am satisfied, be avoided; for with me there is no question, that the cause of that disorder is attributable to the inhaling of air that has passed over a red hot body of metal, by which, having been deprived of its oxygen, it is rendered unfit for respiration. For the sick chamber too, it is peculiarly well adapted, as it emits no unpleasant smell; creates no noise or dust in managing; diffuses a genial glow that can be regulated to a *degree*, by means of a thermometer; keeping it to that point recommended by the attendant physician—a point which in many cases might be of vital consequence; while to the practitioner himself, whose hours of attendance are uncertain to a proverb, and whose nights are so often broken in upon by professional visits, the use of this stove would appear absolutely necessary to his well being; for on leaving home, he can regulate the draft of the stove so as that in an instant on his return, after an absence of twelve hours, he may raise the heat to any degree he might choose. But to none will this stove be more convenient than to the farmer, whose concerns so often call him and the members of his family abroad, or into the kitchen or dairy, at which time friends might call, and render a fire in the bettermost room very desirable, although but for a short time; it is, therefore, only to have the stove pretty well filled with wood in the morning, closing the door, and he has it in his power to give his warmest friend a correspondent welcome, by opening the draft of the stove, and on his taking leave, to close it; and as effectually put a stop to all farther expense of fuel, be it even until the end of the day. In short, I know of nothing of the kind that can at all compare with the air tight wood stove, either for economy, comfort, cleanliness or convenience."

And to all this I bear willing testimony, after two year's experience, during which I have never encountered the least trouble or difficulty in the management, or entertained the most distant idea of danger from explosion. It is said these stoves have been constructed so as to burn coal; but I would remark, as the object is oftentimes as much to diminish the heat as to increase it: nay, to extinguish the fire suddenly, and as suddenly to rekindle it, I cannot imagine that any fuel would be so convenient for the purpose as wood; at the same time, that of the hardest quality is much to be preferred, hickory being of more than double the value of pine; it is also more economical to use it as large as can be made to pass in at the doorway of the stove. And in many other ways will the use of these stoves prove of the greatest comfort and convenience, particularly in the cool and chilly evenings and mornings of spring and autumn, as also during the prevalence of damp weather at these and other seasons of the year, when a fire for a few hours only, might be the means of warding off a fit of sickness; while in damp and unhealthy situations, as also in newly erected habitations, the savings in physician's fees have often been more than the cost of them, twice told; a handful of kindling wood being sufficient to cause the diffusion of a sensible degree of warmth throughout the room, and carrying off the damp atmosphere; nay, it is a fact, that the burning of a newspaper only has been often known to cause a very perceptible degree of warmth in the room on a chilly and damp evening in summer. In short, I know of nothing that I would accept in exchange for my stove, if I had not the power to replace it. Your subscriber and constant reader,

Eastern Shore, Aug. 14, 1843. John W. Smith.

SPADE LABOR.

Messrs. Editors—Having been present at an interesting conversation which took place on board the steam ferry boat between Philadelphia and Camden, N. J., on a subject which is not always "understood," but much "seen and felt," I have a desire to record it for publication in your valuable pages. It was commenced by a lad of fourteen, who, on counting the receipts for a quantity of Jersey truck, which he had sold in Philadelphia market, observed, in soliloquy, "One thing's sartin; if we don't put down these canals and railroads, they'll soon do us up: 'tis no use, any longer raising early truck for 'delphia market; the Baltimore folks get there afore us, and that's what I call robbing the milk of the cream." A passenger observed, "Ah! machinery will be the ruin of this country, as it has been that of every other. When I was young, a man could live by his labor, and there was then plenty of employment; but now, what's a man to a steam engine! Such things ought not to be allowed; there are already too many improvements in every branch of business." To which an old farmer replied, "And yet, friend, this has been the case for years, and will no doubt continue as long. But what are the improvements of the present day, compared with the substitution of the plow for the spade in husbandry? If you and I had lived at that time, I dare say we should have expected starvation; and yet people lived through it you see. The plow, however, was only the substitution of one implement for another; the spade itself being also a machine—an innovation on nature's own machinery, the *thumbs and fingers*."

These observations opened, unexpectedly, a very interesting debate upon the real advantages of the plow over the spade, in which it was by no means evident that they were very much and decidedly in favor of the former; nay, in more instances than one, it was attempted to be demonstrated that, taken for all in all, the spade was to be preferred. A person present remarked, he had seen nearly a hundred men, women, and children, digging in a field in France, where were four plows going at the same time; the proprietor of the land assuring him, that he considered the economy of the plow not quite so decisive as was generally believed; the superiority of the crops, both in quantity and quality, and the condition of the land after spade culture, often paying very handsomely for the extra expense; while the occupation which it furnishes for the agricultural population of a country, is of still farther importance. In his estimation, the greater facility rendered by the plow, was of more consequence to the husbandman, than the difference in expense.

Reflecting afterwards on what I had heard, and remembering that I had somewhere seen an interesting account of a set of experiments that had once been made in England, for the purpose of ascertaining the difference in cost and produce of the two systems, I turned to an agricultural work of the time, and was so fortunate as to drop on it; here it is:

"Mr. W. Falla of Gateshead, Newcastle upon Tyne, gives a detail of experiments made during four years in succession, in the culture of wheat by the spade, which places this mode of tillage in a very favorable light. He had long cultivated a nursery garden of one hundred acres by this method, when his attention was directed to the spade culture of wheat, on learning that an experiment had been made at Fottingham, the result of which was beyond all example. From Mr. Falla's statement of the expense of digging and sowing one acre of land broadcast with wheat, including the price of seed, it appears that the cultivation by the spade cost five shillings sterling more than by the plow; but the comparative value of produce was so great as to leave no doubt of the vast superiority of the former method; for averaging the crops of two years raised by spade cultivation, they gave for each year, sixty-eight bushels and a half per acre. The average produce of his neighborhood, raised by the plow, being twenty-four bushels per acre. But, instead of taking that as a criterion by which to make a comparison, in the autumn of 1819, much pains were taken to ascertain the exact quantity of wheat contained on a field immediately adjoining, and which was considered a remarkable crop; by which it was proved to be thirty-eight bushels per acre. This was on land of naturally better quality, quite as highly manured, and worked in the usual manner by a two horse plow, the crop sown also broadcast. Stating the wheat at eight shillings per bushel, the then market price, the following was the result:

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* Farmer's Cabinet.

By the spade, 68½ bushels per acre, at	8s..	£27	8	0
By the plow, 38 " "	8s..	15	4	0
The difference, ...		£12	4	0

Being the advantage gained by the extra expense of five shillings sterling."

It is added by way of remark, "It is well known that water enters so largely into the food of all plants, that if its gradual supply can be secured, the husbandman feels assured of a fair return for his labor; whatever mode of cultivation, therefore, can best effect the object of drawing off from the seed or plant an *excess* of water, and retaining the surface as a reservoir from which a gradual supply of moisture may be obtained as required, must possess decided advantages. It is also known, that to obtain the best crops, the soil ought to be well broken and separated; and the nearer it is brought to the state of garden mold, the more perfect the cultivation. And these facts no one will dispute, nor will any deny, that the spade is better calculated to prepare a better recipient than the plow, for an excess of water in rainy seasons, and to return it to the seed or plant afterwards, in a manner more favorable to vegetation. The spade, wherever there is sufficient soil, opens it to a depth that allows the water to pass freely below the bed of the seed or plant, and to remain there until a long continuance of heat draws it forth again, to replenish the crop when it most requires to be gradually supplied with moisture; and the greater depth to which the soil is opened, the greater will be the advantages of this important operation. But the action of the plow upon the soil is the reverse of that of the spade, in the following important particulars. Instead of *loosening* the subsoil, it hardens it; the heavy, smooth surface of the plow, and the frequent trampling of the horse's feet, tend to form a substance on the subsoil well calculated to prevent the water from penetrating below it; and in many soils, after a few year's plowing, it is there retained, to drown the seed or plant in rainy seasons, and to be speedily evaporated when it would be the most desirable to retain it; and thus the crop is injured and often destroyed in dry weather, for the want of that moisture, which under a different system, might have been retained in the subsoil—that system being *culture by the spade*."

Now, although it is not probable that cultivation by the spade will be practiced in the United States for many years to come, yet, there is no question that the mode of its operation is incomparably the best adapted to the raising of large crops. How all-important then is it, to select those plows which are best suited to the purpose of *pulverizing the soil to the depth it is turned*, after the manner of the spade, without regard to the smooth and shining surface displayed on the upturned furrow, or the clean and well pressed edge of its land side; qualities which are deprecated in the garden, where, it is acknowledged, is found the best system of culture. The subject is so important that I may turn to it again; in the meantime, I subscribe myself your friend and constant reader,

Springfield, N. J., Aug. 16, 1843. J. D. C.

ANSWERS TO INQUIRIES FROM N. CAROLINA.

MESSRS. GAYLORD & TUCKER—With you, small grain and the grasses, with roots, appear to be the staples; with us, cotton and Indian corn,—for a market, almost exclusively the former. Manures, as you are probably aware, have received very little attention here. "No time" to raise manure. The grand object has been to clear, and hence to wear out, to abandon; but to improve, appears never to have entered their system. "Book farming" and "book farmers," are speckled birds in our country, and for a man to adopt and persevere in any course of improvement, requires a moral firmness which few of us possess. What may have increased the difficulty in regard to improvement, is the want of many of the articles which are so conveniently obtained by you. In the interior of North Carolina, we have neither lime, marl, plaster, bones, nor many of the numerous articles of compost in use with you. If we obtain them, it must be by purchase, and that with much expense and trouble, the cost of transportation often exceeding the prime cost. Your population is more dense, your towns and cities more numerous, your facilities greater; and hence you obtain all you want much cheaper and easier. My land is somewhat rolling and stoney, being near the commencement of the hill country. From the abundant and luxuriant growth of sorrel all over the cultivated part, I presume *lime* would be the grand dispossessor of this enemy of the farmer. But this article, selling in New-York from 80 to 100 cents, costs us at least $2,00 per bbl. exclusive of hauling 12 miles. Now, an interesting question arises. Can I use lime upon my soil to advantage and profit, at this great expense; especially as I observe from the remarks of Dr. Dana, that a little lime, like a "little learning, is a dangerous thing," or in other words, that the quantity must be abundant to realize the benefits desired. What is the least possible quantity to be operative, and should it be sown broadcast and plowed in? I have had an idea of mixing equal quantities of lime and wheat, and sowing together. What think you of the plan? *(a.)*

I have before my eye a field, a part of which I wish to devote to a vineyard. It is a little undulating; light sandy soil; having clay foundation some two feet below the surface; open to the south and east, and protected on the north and west by a thick forest, and last, though not least, very poor! Now, Messrs. Editors, can I succeed here? "Not without manure," say you. Very well: can I *with* it? If so, what kind, how applied, and when? Farther, when is the most propitious time for setting the vines, and what are the proper distances? *(b.)*

How will the same field answer for the apple and peach tree, and what kind of manure is best, particularly for the latter? I am almost deterred from attempting to rear the peach, from the numerous diseases to which I perceive it is subject. At what age should the peach tree be removed from the nursery to the orchard; and at what age of the apple tree is grafting to be performed? *(c.)*

I notice the recent advice of an agricultural journal, to "cut down, put into piles, and as soon as dry, have burnt," all the weeds and briers with which the land is infested. Now I have just been pursuing a very different course from this, and am in doubt as to its propriety. I have a lot of ground which I have taken into my grove, and was formerly under cultivation. Upon it has sprung up a vast quantity of weeds and briers. These I have had pulled up, hauled to my stable yard, and while yet green, thrown into heaps as follows: 1st. A layer of wet wheat straw; on this I sprinkled a course of *slaked* lime; then a layer of clay, (designed for a sandy soil;) next a layer of weeds with lime sprinkled thereon; then the clay, &c. until my heap was completed. Now, gentlemen, shall I next spring have a pile of *manure*, or shall I have millions of weed seed, to be scattered over my land? If the former, is my compost judicious, or could you have improved it? I have half a mile off, good swamp mud, but "I hadn't time" to get it up. Withal, I thought the clay would do well for the sandy soil. I recently made a large heap composed of scrapings of wood yard, pine leaves, litter from the stables, and lime, alternately mixed, and think I shall realize from *this* pile a parcel of good manure. When making this pile, a conversation occurred between one of my servants and myself, which permit me to detail. He was engaged in spreading lime, and with a thoughtful air he asked: 'Master, what do lime cost, sir?' "Two dollars per bbl., Bob, besides the hauling." He did not reply, but from his inquisitive and sceptical look, I opined that he doubted—if not the utility, at least the profit of the application. "Why Bob, do you think we never shall get repaid for our lime?" "I don't know sir, but it looks like as if it was all lost." *(d.)*

Now, gentlemen, do you think with Bob, my lime will all be lost, or will its use here repay me at $2,00 per bbl., and hauling? *(e.)*

What is your usual practice in regard to sowing oats, as to time? With us, it is universally done in the spring; but from the frequent failures owing to wetness, &c. of the weather, I have been disposed to try the sowing them in the fall. My neighbors say it won't do, the winter will kill them, and I am almost afraid to try the experiment. If I am not mistaken, however, I think the northern practice is to sow in the fall, and if so, your winters, much more severe than ours, do not kill them, and I should suppose they would stand our climate. Please enlighten me. *(f.)*

The beautiful grass plats and pleasure grounds of the north have frequently attracted my attention, and I should be pleased to know how their beauty and regularity are obtained. Are the grass seeds sown where designed to stand, or is it done by turfing? When should the seeds be sown, what preparation is necessary, and what kind mostly used for this purpose? *(g.)*

The idea which I have heretofore attached to the term "meadow," is inseparable from that of low, swampy bottom lands, and this is the definition given it by Webster. Yet from the knowledge I have of the geography of the northern states, I presume your ideas of the term are more enlarged, or at least your practical use of meadows are not confined to the low lands. Am I right in supposing your high and rolling lands devoted to the grasses, or are they exclusively confined to the bottoms? Are such locations as I have described mine to be, undulating, gravelly, dry, adapted to the growth of grasses, and if so, what preparation is necessary to bring them into cultivation? *(h.)* WM. H. WILLS.

Rocky Hill, N. C., Aug. 30, 1843.

(a.) Lime is undoubtedly one of the best applications on lands disposed to a growth of sorrel. The quantity used may be from 50 to 100 bushels per acre, and it will generally well repay the expense. Has our correspondent tried plaster on his land? We think it would act favorably. Sowing lime with wheat, is an excellent practice. His letter found us engaged in brining and liming seed wheat for our fall sowing. The preparation acts favorably on the seed, aids germination, and prevents smut.

(b.) We should think the vine would succeed well on the ground mentioned. Vegetable manure, such as decomposed leaves, weeds, &c. is the best manure for vines. As the vine is to be permanent in the soil, it matters little when the manure is applied, if only there. The prunings and leaves of the vine itself, furnish the best of dressings, if covered in the soil when first taken off. April or May, is the best time for planting the vine, or perhaps it might do earlier there. The distance will depend on the manner of training. If single and upright, as in most foreign vineyards, six feet apart will be sufficient; some put them at four feet.

(c.) The planting of apple and peach trees in the same field, should be avoided if it can conveniently be done. From two to three years of age is the best time for removing the peach; and grafting may be performed on the apple tree at any time after the first year's growth.

(d.) Our correspondent's treatment of his weeds and briers is an excellent one, provided the fermentation produced in their decomposition is sufficiently active to destroy the seeds of the weeds, which it doubtless would be. Clay pulverized or made fine, is a good addition to a compost heap intended for sandy soils. We have known the spreading of clay alone on such soils, produce an astonishing effect as retaining the water necessary for vegetation. The best compost is made of barn yard manure and swamp muck, one part of the former to two of the latter. Swamp muck is a treasure to the farmer.

(e.) Lime will not be lost applied to sandy soils; but clay marl, or a mixture of clay and lime is better. Has our correspondent ascertained that the clay underlying his sand, does not contain lime? We think it probable it does, and that the means of improving his soil are nearer than he supposes.

(f.) Oats are *never* sown in the fall at the north. The winter here would inevitably be fatal. Experiment would show him the result there.

(g.) Grass plats or pleasure grounds are formed here by sowing the seeds, although they may be made by turfing. After the grass is once rooted, it is kept smooth and even by frequent cutting. The thicker the roots of grass, the finer and more even the turf.

(h.) Formerly the term "meadow," was used as our correspondent supposes. Under the New Husbandry, or that based on a rotation of crops, every part of a farm is in succession meadow or plow land, and the best farms are those on which this system is most fully carried out. We pasture, mow, raise corn, roots, or wheat, as the course may be, successively, on the same ground, and when well conducted, without fear of exhaustion. The New Husbandry knows no 'old fields,' 'meadows,' or 'swamps,' as such; all are made to produce any crops it is desirable to put upon them.

MESSRS. GAYLORD & TUCKER—Will you permit a recent subscriber to trouble you with a few inquiries on the subject of *Muck, Compost,* &c.?

Being "seized and possessed," (as the lawyers would say,) of two or three hundred acres of land in the immediate vicinity of this place, and having some little turn for agricultural pursuits, I have lately been thinking whether my little farm might not be turned to purposes of profit as well as amusement. To this end, I see that I must give all attention to the subject of *manures*. But how to make the greatest quantity at the least trouble and expense, I would be glad to know. I have been trying *clover* for two or three years; but I fear that our southern suns will ever prevent it from being such a fertilizer with us as it is with you. Last November, I made a compost heap of burnt clay, stable manure, and leached ashes, and hauled it out in February and March, upon my meadow. The effect has been such as to encourage me in further attempts to add to my stock of manure.

Having seen a good deal said in the late numbers of the Cultivator, on the subject of *muck* or *swamp mud*, I hope you will excuse me for inquiring farther about it. Within two hundred yards of my field, there is a small pond which covers about two acres in a rainy season, but is sometimes dry during our long summers. When the water first subsides the bottom presents the appearance of swamp mud, of a rich dark color. But after being exposed to the sun a few days, it becomes somewhat ashy in appearance, splits or cracks in various directions, and seems somewhat tenacious or tough. When thoroughly dried, it resembles that well known domestic article, rotten stone. Now is this deposit what you call *muck?* And is it, in your opinion, worthy of admission into my compost heap? A learned friend of mine, (but no practical farmer,) tells me it is worth "just nothing." My next door neighbor, (a nice manager, but a young farmer,) hauled a good deal of it into his stable yard two or three winters ago, but found the large lumps so hard to be dissolved that he got out of conceit of it. For my own part, I scarcely ever pass that pond, without thinking that there is a treasure at the bottom of it, if I only knew how to avail myself of it. Will you be so good as to give me *your* opinion on the subject, and let me know what is the best mode of preparing it for the soil. In order to furnish you with every facility for answering my inquiries, I will state that my land is of a light gravelly character, abounding with loose stones, and having a foundation of red clay some six or twelve inches below the surface. *(a.)*

Having despatched this matter, I now trouble you with another query. In making a compost heap, supposing the materials at hand to be burnt clay, spent ashes, charcoal, pond mud and stable manure, in what order would you place them, and in what proportions? Would you recommend the introduction of charcoal into the heap, or would you rather use it as an absorbent in your stables? Supposing a compost made of the above materials *now, when* would it be fit for use? (*b.*)

Another question. What is the best method of rooting out the wild onion? I am much plagued with it. (*c.*)

Again. What do you and your correspondents mean by a *load of manure?* Is it a one horse, a two horse, or four horse load? G****.

P. S. A correspondent in one of your late numbers, wishes to know how to prevent dampness in brick walls. Tell him, (if he is about to build,) to make his walls hollow, as it is called, or to leave flues or open spaces in the center of the wall, about 12 inches apart, and of the size of half a brick, running from the foundation to the top, the lower openings being on a level with the sleepers, the upper opening into the roof. This prevents the outward moisture from striking through to the inner wall, inasmuch as the currents of air circulating through these flues, carry it off as fast as it penetrates to the center. If your correspondent's walls are already built, the only preventive that I know of, is to wash the exterior with a composition made (as common whitewash is made,) of equal portions of lime and hydraulic cement, colored with copperas, or any other coloring material that may suit his fancy. I need not be more specific in my directions, as there are no doubt many operatives within your reach, who know much more of the matter than I do. If I did not suppose that the method of preparing and applying this invaluable wash was known to you and a majority of your readers, I would take pleasure in communicating it.

Chapel Hill, N. C., Aug. 21, 1843.

(*a.*) The deposit spoken of by our correspondent, would seem to be what is called swamp or pond mud; composed of vegetable matter, and earth or clay. Its value depends on the quantity of the first article. We should have no doubt of its fertilizing qualities, and should make it into compost with stable manure. If too stiff when dry, use it when moist, or before it becomes dry, after being taken from the pond.

(*b.*) The burnt clay and the charcoal produce their greatest effects as retainers of ammonia for the use of plants, although the slow decomposition of charcoal also furnishes some carbonic acid gas for the same purpose. The compost heap may therefore be considered as made of swamp mud, ashes, and stable manure. A compost made of one-half muck or mud, one-fourth ashes, and one-fourth stable manure, would doubtless be a good one; although no definite proportion could be given until the character of the mud or muck was ascertained. If in the fermentation of the compost considerable ammonia should be thrown off, a covering of burnt clay or charcoal would be a good application. But in whatever way any of these substances are used, the effect can scarcely fail of being beneficial.

(*c.*) Thorough summer fallowing is the best remedy for the wild onion that we are acquainted with; careful weeding of the fields, and purity of seed wheat, the next.

(*d.*) By a *load* of manure, is generally understood, a load drawn on a wagon with two horses, and containing usually half or three-fourths of a cord.

One word as to what our correspondent says about clover. We think if our southern friends would bring to the surface some of the clay which underlies their sands, and incorporate it with them, remedying the unproductiveness of this subsoil when first taken up, by a dressing of such compost as he has described, that one, if not the only serious obstacle to the culture of clover, would be at once removed. Look at the experiments on the sands of New Jersey and Virginia, with clay marl, under the direction of such men as Cooper and Ruffin. The great success in these cases, is ample encouragement to others.

SUGGESTIONS, INQUIRIES, &c.

Messrs. Gaylord & Tucker—As the time is approaching when your State Ag. Society holds its annual meeting, I have one suggestion to make in relation to the statements of those who apply for premiums on field crops. I think those statements should specify the variety of grain grown. There are several varieties of wheat, corn, barley, oats, peas, &c., and frequently much of the farmer's success depends upon the variety of seed sown or planted. Important as this information is, it is almost invariably withheld in the statements alluded to.

When I read Mr. Physick's theory on raising corn, in the last vol. of the Cultivator, I was ready to say he was not a practical farmer. But if we are to credit the statement of Sam'l Phelps, to whom was awarded the first premium on Indian corn, by your State Society, it goes farther to support that theory than any thing of a practical nature I have ever witnessed.

There are, I am persuaded, but few practical corn growers in the United States, that would expect even a moderate crop when planted as thick as Mr. Phelps planted his, and I cannot reconcile his success with my experience, except upon the supposition that he has a different variety of corn from that usually grown. At any rate, if any of our common varieties will produce 122 bushels of good sound corn to the acre, when planted two feet apart each way in the rows, with three stalks in the hill, I should like well to know it, and I will alter my practice accordingly.

Sorrel.—Do you say that land cannot be freed from sorrel, by thorough hoeing or summer fallowing? I supposed that it grew from the seed or root, the same as other weeds, and that the soil could be freed from it by thorough cultivation. If this is not the case, I wish to know what quantity of lime is required per acre or square rod, for its destruction, and also when and how it should be applied?

Should it be applied in the same manner and in the ame quantity on meadow, pasture and summer fallow? Should it be quick lime, and is it necessary to apply it in sufficient quantity to injure other vegetation?

I have some patches of sorrel in my fields, and I do not wish to raise it for meadow or pasture, so long as I can grow timothy or clover, and I discover that it is fatal to wheat. Is there not lime enough in some soils when new, if plowed deep and thoroughly mixed, to correct the acid tendency without an external application?

I wish also to make some inquiries in relation to the use of plaster.

1. Does plaster have the same effect on new, as on old and worn out soils?

2. Is there any difference in the plaster that is found in different localities, with regard to its value as a manure?

3. How should it be applied as a top dressing, after the plants are up, or at seeding time; or should it be mixed with the soil previous to seeding?

4. What quantity should be used per acre on meadow, pasture, or on different kinds of grain?

5. Is there danger of using too much, or of applying it too often to plants.

6. I can obtain Grand River plaster for about $3 per ton. Is it good economy to purchase any quantity for agricultural purposes at that price?

7. I have tried manuring corn and roots with long manure, without deriving any benefit. The land being new, the manure cannot be thoroughly mixed with the soil, and in a dry season I get the best crops where there is no manure applied. Cannot the essential properties of manure be retained by occasionally scattering plaster in the yard, until it can be applied in a fermented state to the wheat crop? Last season I applied the manure that was obtained by scraping the yards during the summer, after the long manure was removed in the spring, to the poorest spots in a field that was summer fallowed and sown to wheat in the fall, and the wheat where the manure was spread was decidedly better than in any other part of the field, though the wheat was generally good. The soil is gravelly, and not subject to an overgrowth of straw.

Perhaps I may remind you of the man that Dickens met with on his western tour. But I really desire information on the matters that I have made the subject of inquiry, and there may be other of your readers that will be benefitted by the answers that you or some of your able and experienced correspondents may make to these inquiries. Alonzo Sessions.

Ionia, Mich., Aug. 14, 1843.

Sorrel may undoubtedly be destroyed by good cultivation as other weeds are, but in a favorable soil, or one containing acid, its hold is very tenacious, and a change of the character of the soil by the use of lime, is found advisable. Lime should be applied in the caustic state at the rate of from 50 to 80 bushels per acre. It is best applied to a fallow, some three weeks before the seed is sown, and should be well harrowed in. Deep plowing will doubtless in many cases render unnecessary the application of lime, and on most soils prove decidedly useful to the crop.

Plaster produces a more sensible effect on exhausted lands than on new and fertile ones, the latter not requiring its aid. It produces more effect on gravelly or sandy soils than any other. It may be sown on the fallow before or after sowing, but we prefer sowing it on the plants after they are well up in the spring. When used on wheat after clover is sown, the young plants of clover are almost sure to succeed. From a bushel and a half to three bushels per acre, may be used. The only injury we have known result from the use of a large quantity, was so great a growth of clover as to render it almost unfit for hay. The common price of plaster at the Onondaga mills, is from $2 to $2,50, and immense quantities are used annually at those prices; and we should advise its use in connexion with clover were the prices doubled.

Long manure in a dry soil and a dry season, may be fatal to corn. In a moist soil it will succeed better, as it assists in keeping the ground warm and dry. Long manures are useless as manures, until decomposition commences, and in a dry soil or season this does not take place readily. Plaster is beneficially scattered in barn yards, as is swamp muck, or even common loam; but we believe the best way to use barnyard manure, is to use it for the compost heap with swamp muck, mud from ponds, leached ashes, &c. &c., and fermented in that way, the quantity and value of manure is greatly increased. The fermentation too destroys what seeds of weeds may be in the manure of the yard, and every farmer knows too many are scattered with the dung. The scrapings of the yard are the most valuable part of its manure, consisting of the finer materials, and these saturated with animal matters and salts.

WHEAT CULTURE, &c.

We give the following from a young friend in Wyoming co. in this state, showing the method of cultivating the wheat crop there. He will pardon us for giving an extract from his private note, as we would wish to call the attention of thousands of our young men to the necessity of obtaining a thorough knowledge of agriculture, and express the gratification we feel whenever an inquiring mind is connected with the practical hand. It is from that connexion the most valuable results are obtained; and we feel no difficulty of assuring our young friend of ultimate success, if he shall continue, as now, to unite theory and practice:

"It may not be uninteresting to you to know who your correspondent is. He is a farmer's *boy,* who has seen but eighteen winters—and many sick days. But possessing an inquisitive mind, thirsting for knowledge, he at all times is pleased in searching for truth and knowledge. And being on the farm most of the time, he wishes to understand the theory as well as the practice of farming; therefore he takes the Cultivator."

"Our soil is generally of a sandy loam, and founded upon a rock; this rock comes to the surface in some places, and is at the depth of 20 feet in others. It consists of layers from 2 to 12 inches in thickness. [Moscow Shales of the State Geologists.—Eds.]

"Our procedure of farming is this: In raising any kind of grain, a coat of manure must be turned under or no crop. In the spring, clover seed is sown on the wheat ground, at the rate of from a pound to two pounds to the acre; after the wheat is cut, the young clover makes fine feed for the cattle and sheep, the old pastures being rather lean. In June we commence breaking summer fallow, when the clover is knee high and in blossom. It is then harrowed, (twice, if it is to be plowed but twice,) plowed again about the middle of August, harrowed, plowed the last of Aug. and first of Sept., sowed and harrowed twice. Two bushels of seed to the acre; yield from 20 to 35 bushels per acre. When we sow flint wheat, a bushel and a half is considered sufficient for an acre. The wheat crop in this town is quite light, by reason of not having a crop of clover to turn under last year. The clover seed did not vegetate. What wheat there is, is very good. The wheat that was sown before the rain last fall, is considered the stoutest and the least affected with the smut. Barley is good. Oats and potatoes are very light, caused by dry weather. Corn not very stout, but better than was expected; just beginning to glaze. The timber is mostly oak; a few pines and ash. Would it not be better to sow buckwheat on the fallow, after breaking up, and turn it under at the second plowing, than to let it lie barren through the summer?"

Veterinary Department.

SWINEY IN THE HORSE.

Messrs. Editors—I will give you such information or experience as I possess, concerning the swiney. I had a mare that became swineyed in the hip, occasioned by fighting with another horse. I was told the part affected never would fill up, unless by the operation of some medicine. I therefore bathed the part affected with saltpetre, dissolved in water, and effected a complete cure. Lansingville.

Lansing, N. Y., Aug. 18, 1843.

CURE FOR SPAVIN.

Editors of the Cultivator—The following I have found would cure a bone spavin in its first stages, if properly applied. Add to two table spoonsfull of melted lard, one of cantharides, made fine or pulverised, and a lump of corrosive sublimate, pulverised, as large as a pea—all melted up together, and applied once a day till used up, confining it to the callous. This quantity is for one leg, and may be relied on as a cure. It will make a sore, and the joint will be much weakened while applying the medicine. No need of alarm; it will all be right when healed up. Edward D. Worbasse.

Edon Farm, N. J., 8 *mo.* 26, 1843.

GRUB IN THE HEAD OF SHEEP.

Our Ellington, (Chautauque co.) correspondent, will see that we have somewhat condensed his inquiries. Space compels us to this course. For the kind words and wishes, he and others are pleased to express, we can only say we are grateful, and shall endeavor to deserve them:

"What will cure a sheep that has what is called the grub in the head; or what is still better, what will prevent that difficulty? The symptoms are, ears lop, head droops, bloody watery matter from the nose, in a few days scouring, then the loss of their limbs, and they will eat for some days after they are unable to rise; and lie on their broadside. We are getting into the wool business pretty well in this town, and have lost more sheep from the grub than from any other disease. 16 grubs have been found in the head of one sheep."

The grub in the head of a sheep, is the larvæ or maggot of a fly, which deposits its egg in the nose, generally in the month of August. The egg soon hatches, and the young maggot soon makes its way up into the cavities called the frontal sinuses, where it attains its growth, causing constant irritation and disease, and not unfrequently death. Arrived at its growth, it falls to the earth, enters it, and in a short time emerges a perfect insect or fly, ready to commence the career of reproduction and destruction. We formerly lost many sheep from the grub, and could find no cure for them, or but very partial ones, after it became evident they were diseased. Our course was preventive. About the time the fly made its appearance, which is easily known by their exhibiting great alarm, running from one part of the field to another, with their noses close to the ground, &c. we caught our sheep, and with a wooden spatula or flat stick, rubbed the nose with tar. We then placed tar on the bottom of our salting troughs, over which the salt was sprinkled, and this brought their noses frequently in contact with the tar. This course we found a great preventive. Sheep, during the period they are exposed to the attacks of the fly, should have access to a plowed field, or if such is not convenient, a few furrows should occasionally be opened in their pastures for their benefit. Inhaling the dust, or rubbing their noses in it, renders the mucus disagreeable to the fly, or enables the sheep to expel the larvæ when deposited. With these preventives we have rarely lost a sheep from the grub, and think that in most cases they will be effectual.

Hog poisoned by Tobacco.—A correspondent of the Maine Farmer, says he lately lost one of his best hogs, a very fine one, by its having accidental access to, and eating a few stems of tobacco, which had been boiled for the purpose of making a liquor to destroy lice on an animal. The effect was extensive swelling of the intestines, and then of the whole system, with speedy mortification. Tobacco stems are frequently boiled for the purpose indicated, and great caution should be used in disposing of them.

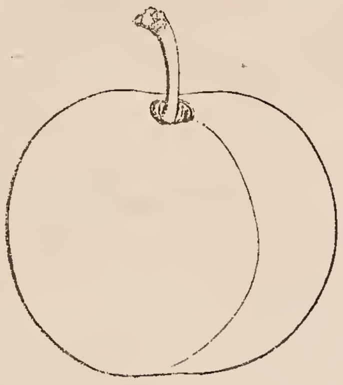
The Garden and the Orchard.

FIGURES AND DESCRIPTIONS

Of Six varieties of Plum, worthy of general cultivation, by

A. J. Downing.

I. Green Gage.
(Reine Claude.)
(Grosse Reine.)
(Vert Bonne.)

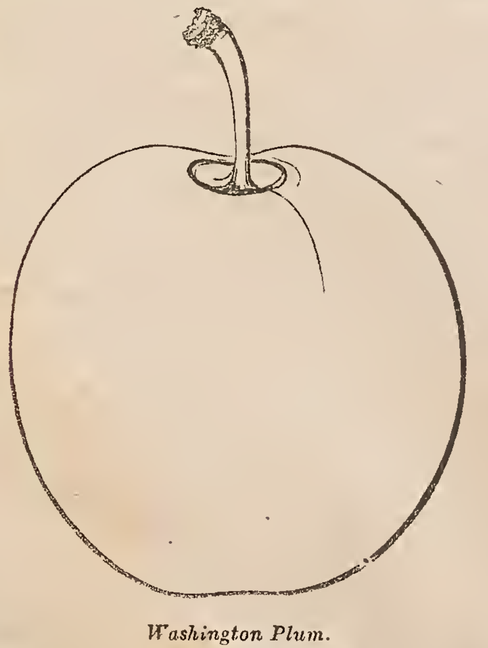

Green Gage.

The Green Gage is universally admitted to hold the first rank among plums in flavor, and is every where highly esteemed. In France, this plum is generally known as the Reine Claude, having as it is said, been introduced into that country by Queen Claude, wife of Francis I. During the last century, an English family by the name of *Gage*, obtained a number of fruit trees from the monks of Charteuse near Paris; among these was a tree of this plum, which having lost its name, was called by the gardener, the Green Gage. It is considered by Lindley, as without exception, the best plum in England.

The Green Gage is a very short, jointed, slow-growing tree, of spreading and dwarfish habit. It is an abundant, and a pretty regular bearer—though the fruit is a little liable to crack upon the tree in wet seasons.

Branches smooth, buds with large shoulders. Fruit round, of medium size or a little below it. Suture faint, but extending from the stalk to the apex. Color green, slightly inclined to yellow, and often a little dotted or marbled with red in the sun. Stalk a little curved, half an inch long, inserted in a small cavity. Flesh yellowish green, exceedingly melting and juicy, and separates in almost all cases, freely from the stone. Flavor exceedingly rich and exquisite. The Green Gage is in perfection about the middle of August.

II. Washington.
(Bolmar's.)
(Bolmar's Washington.)

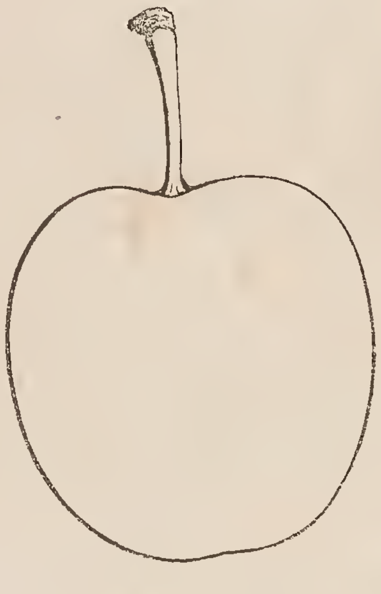

Washington Plum.

The Washington undoubtedly stands higher in general estimation than any other plum in this country. Although scarcely equal to the Green Gage in flavor, its great size, its beauty, and the vigor and hardiness of tree, are qualities which have brought this noble fruit into notice every where. The parent tree grew originally on Delancey's farm, on the east side of the Bowery, New-York, but being grafted with another sort, escaped notice until a sucker from it, planted by Mr. Bolmar, a merchant in Chatham street, came into bearing about the year 1818, and attracted universal attention by the extraordinary beauty, size, and flavor of the fruit. In 1821, this sort was first sent to the Horticultural Society of London, by the late Dr. Hosack.

The Washington has remarkably large, broad and luxuriant glossy foliage, is a strong grower, and forms a handsome round top. Like many other varieties of plum, the fruit of this does not attain its full perfection until the tree has borne for several years. We have measured them very frequently six inches in circumference, and once, from Mr. Bolmar's original tree, seven and a quarter inches.

Wood light brown, downy. Fruit of the largest size, roundish oval, with an obscure suture, except near the stalk. Color dull yellow, with faint marblings of green, and when very ripe, sprinkled with a few orange or crimson dots. Stalk three quarters of an inch long, slightly downy, inserted in a shallow, but rather wide hollow. Flesh yellow, firm, very sweet and luscious, separating freely from the stone. Stone pointed at each end. Ripe middle of August.

III. Imperial Gage.
(Imperial Green Gage.)
(White Gage of Boston.)
(Flushing Gage.)

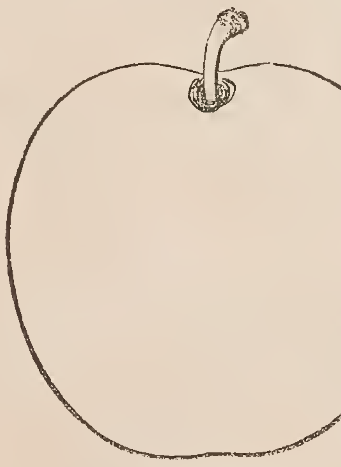

Imperial Gage.

This is a very valuable plum, raised from the seed of the Green Gage, by Wm. Prince, Flushing, L. I. It is larger than its parent, being often nearly as large as the Washington, and is perhaps more regularly productive than either of these varieties. It is an exceedingly rapid grower, but with darker green, narrower, and smaller leaves than the Washington, and with very long upright shoots. In the neighborhood of Boston and New-York, this is esteemed as the most valuable and profitable of plums.

Branches slightly downy. Fruit large, with a distinct suture, pretty regularly oval. Color before fully ripe, green; when ripe, pale yellow or yellowish green, with abundant white bloom, and with very distinct and striking stripes, or marblings of dull green. Stalk an inch long, slightly hairy, inserted in a broad and shallow hollow. Flesh greenish yellow, melting, and adheres to the stone. Juice exceedingly abundant, sweet and luscious.

In the American edition of "Lindley's Guide to the Orchard," this plum is incorrectly described under the name of *Flushing Gage*, as being a free stone. The Imperial Gage being the name given this plum by Mr. Prince, in his description, we have adopted it here.

IV. Lawrence's Favorite.
(Lawrence's Gage.)

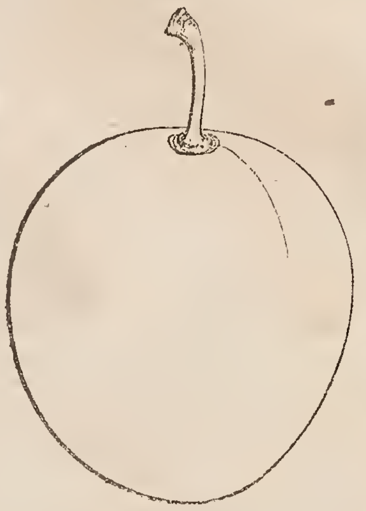

Lawrence s Favorite.

A new variety, of high merit, raised by Mr. L. U. Lawrence of Hudson, N. Y., from a seed of the Green Gage. The soil of Hudson, which is almost a stiff clay, is so wonderfully adapted to the growth of the plum, that a great many excellent sorts have originated there with the least possible care. This variety, and the Columbia, are already cultivated in all the gardens in that vicinity, and the remarkable size, beauty, and flavor of the Lawrence Favorite, will soon give it an universal reputation.

Lawrence's Favorite forms an upright tree of thrifty growth, with dark green leaves, rather below the medium size, and with upright growing, short jointed shoots. Young branches slightly downy.

Fruit of the largest size, when the tree is not overloaded, nearly round, but inclining to an oval form. Stem short, only half an inch long, inserted in a narrow cavity. Skin dull green, clouded with streaks of darker shade beneath, and covered with a light bluish green bloom. The upper part of the fruit, when fully ripe, is frequently covered by a brownish net work. The flesh resembles in color that of the Green Gage, and adheres closely to the stone. The latter is five-eighths of an inch long, and flattened. Juice exceedingly abundant, and the melting flesh is very rich, sprightly and luscious. Ripe about the middle of August.

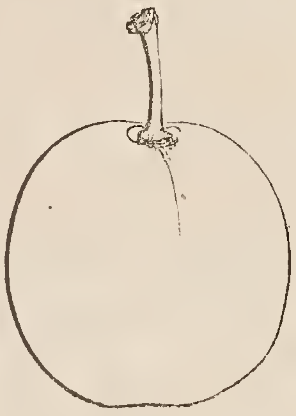
V. Autumn Gage.


Autumn Gage.

A new plum raised by Wm. Roe, Esq. of Newburgh, of good quality, a very abundant bearer, and so late in its maturity as to be valuable. The tree forms a rather spreading head, with regular pointed ovate leaves, the branches drooping with the weight of the fruit, which is in perfection about the middle of September.

Branches slightly downy. Fruit medium size, oval, a little broader towards the stem or base. Stalk three quarters of an inch long, inserted even with the surface of the fruit. Skin pale lemon yellow, covered with thin whitish bloom. Flesh greenish yellow, separating from the stone; juicy, sweet, and of delicate, pleasant flavor. Stone long, compressed, pointed at both ends.

VI. Frost Plum.
(Frost Gage.)


Frost Plum.

A pretty large variety of sweet Damson, which appears to have originated in Dutchess co. of this state, where it has for many years past been most extensively cultivated for market. Before fully ripe it abounds with sprightly acid juice, and is highly esteemed for preserving; and when at maturity, it is a sweet and luscious fruit for the table. The tree is a tall upright grower, with smooth and rather slender shoots, and bears abundantly. The fruit is in perfection about the 1st of October, and from its lateness and good quality, frequently commands from two to five dollars a bushel, even when hundreds of bushels are sent to market at once.

Fruit below the medium size, varying from oval to nearly round, with a distinct suture on one side. Color deep purple with a few brown specks. Stalk half to three-fourths of an inch in length, inserted with little or no depression. Flesh amber color, juicy, sweet, rich and melting, and adheres to the stone.

Horticultural Nurseries, Newburgh, Sept. 15, 1843.

MANAGEMENT OF THE PEACH ORCHARD.

Messrs. Gaylord & Tucker—Your valued correspondent, Mr. L. Physick, has given us in your last no., an excellent article on the "Management of Fruit Trees," which in this latitude is of peculiar interest; and after a careful perusal I am constrained to his opinion, much as it militates against the practice of this part of the country, which is in favor of the constant tillage of the orchard. Our great peach growers are accustomed to plow and harrow their orchards three times during the summer, for the alleged purpose of keeping their trees in health; being assured that without this troublesome and expensive operation, they would soon die of the yellows. Now, to be sure, this *might* be the result of a neglect of cultivation, but your correspondent has led me seriously to question even its propriety, to say nothing of the advantages which are expected to result therefrom; and in casting about for experimental proofs, I believe that facts will be found to go against a custom, which is here so very generally acknowledged and approved. That orchards may be cultivated and cropped with impunity while the trees are young, there is, I think, no question; but long after, and when in the estimation of our Delaware friends, all *cropping* ought to cease, the periodical turning up the surface is religiously continued with the sole view of keeping the trees in health. Now, for the purpose of testing the real value of a practice which involves an expense of labor amounting to many hundred dollars annually, I would ask, has the very productive peach orchard, containing about three acres, belonging to Major Philip Reybold, and from which he has sold $2,700 worth of fruit in a year, besides distributing $300 worth among the members of his extensive family, been kept regularly under tillage? or rather, has not this orchard been used as a pasture for sheep, and the herbage been found of more value in some years than the fruit? Again, do orchards that have been scrupulously submitted to the periodical workings by the plow and harrow, *surely* retain their health and vigor and verdure, while others of the same age and in the same situation, when left uncultivated, die by scores of the disease called the yellows? Are more worms found in trees which are left uncultivated, than in those growing on cultivated land, and is the result always the same? Nay, to come to the point, I would ask Mr. Isaac Reeves, who has had as much experience in the matter as any man, if he has not, at the present time, orchards, where the trees are literally dying off by scores with the yellows, maugre all his care, cultivation and circumspection; and whether he entertains the idea, that the period of their total destruction will be retarded a moment, by the application of the plow and harrow? The time has been, when peaches would grow and come to the greatest perfection without all this labor—a system that has obtained but a few years; but as with all these appliances they have not been made productive for several seasons past—nay, that in this time, and under the most careful treatment, they have literally passed away from many parts of the country, New Jersey in particular, what data can be afforded as proof, that the frequent cultivation of the orchard is to be depended upon, or recommended as a means of sustaining the trees in vigor, or even of preserving diseased trees from total destruction? To "dig around and dung" a diseased tree is another matter, and is a practice against which I am not contending; it is the periodical plowing and working old orchards with a view of sustaining them in health, that is the question before us. I am aware that the subject will remain to be discussed; for as it is not possible to prove a negative, there are no means of knowing that but for this labor, the trees of an orchard would have sooner perished; it is only certain that they have failed *with it*, and this is about all that is requisite to be known. I lately examined a peach orchard while it was under discipline for the worms, and can bear testimony that on a part of it which had never been cultivated, the trees were larger, much more vigorous in growth and in perfect health, with fewer worms, ten to one, than were found in trees growing on the other part, that had been regularly cultivated as a garden, well manured and thoroughly worked, and could not but consider at the time the question settled; but as Mr. C. P. Holcomb of Newcastle, has a peach orchard which he considers as having been materially benefitted by culture, and as he is one of your subscribers, is he not bound to give us his experience in the matter? It is the truth which we are seeking after, and I for one, am willing to follow, wherever it might lead.

Your correspondent's experiments appear to have been well adapted to the purpose of elucidation, and his deductions rational. And in conclusion would add, I planted an experimental crop of corn the present spring, so early that before it broke ground it had a foot of snow on it, several severe frosts occurring afterwards; yet it is now the best and strongest crop that I have any where seen. It has been kept clean, but never worked; that labor having been superseded by a thick top dressing of good dung, placed around the plants and slightly covered with earth from the intervals, when they were two feet in height. This was done with the view of ascertaining whether it is not customary to continue the working of corn long after the proper time for laying it by has arrived; and so far as present appearances warrant, the question with me is decided in the affirmative. I am ready to believe that by much tending the crop, the growth of the leaf and stalk might be encouraged; but judging by my own corn, I believe this may be done to the injury of the ear; just as the straw of a wheat crop may be encouraged at the expense of the quantity and quality of the grain; and which is so often practiced by enriching the land with large quantities of dung immediately before sowing the seed—the fruitful source of the fly and rust also. Your subscriber,

Delaware State, Aug. 15, 1843. JOHN DELANO.

MONTHLY NOTICES.

GOOD WOOL AND GOOD PRICES.—In a recent conversation with our friend GROVE of Hoosick, he informed us that he had purchased the present season over 100,000 lbs. of wool, at an average price of about 36 cents per lb., being an advance of about six cents on last year's prices. For his own wool, from 240 pure Saxony ewes and lambs, he received 60 cents per lb., being 10 cents above last year's price. These 240 fleeces averaged 2 lbs. 13 oz. The price received for it, is a sufficient proof of its quality. The farmers of Hoosick, have received for their wool this season, between $45,000 and $50,000.

We see it stated in the papers, that our friend MORRELL of Tompkins county, has sold his clip from a flock of over 2,000 Saxonies, at 50 cents per lb., being eight cents over last year's prices. His fleeces averaged over 2½ lbs. each.

That we may judge of the comparative profits of the different breeds of sheep, we shall be glad to be informed of the average weight of fleeces, and the prices of the wool, of flocks of Merinoes, South Down, &c. Will Mr. Avery give us the price received for the wool of his flock?

COLUMBIA FLORAL AND HORT. SOCIETY.—The 4th annual exhibition of this Society was held at Hudson, Sept. 21, 22, 23. The display of Flowers and Fruits was unusually brilliant and attractive, and must in several respects have exceeded all other similar exhibitions. We regret that our limits will not permit us to copy the descriptions of the splendid center pieces of Fruits and Flowers, so admirably arranged by our friend Ross and others. We rejoice in the success of this Society, and hope it may excite the other cities of the state to follow the example of our spirited and tasteful friends of Hudson.

THE CULTIVATOR ALMANAC, OR RURAL CALENDAR FOR THE YEAR 1844.—This is the name of a publication issued from the Cultivator office, and containing besides the usual astronomical tables, a great variety of suggestions, maxims, tables, &c. of interest to the farmer, gardener, and planter, items of domestic economy, &c. &c. In the arrangement of the matter introduced, utility has been constantly kept in view, and it is believed that in many respects the Cultivator Almanac will be found a useful manual in the hands of the farmer. It is fully illustrated with plans of buildings, gardens, cuts of various animals, and implements, &c. Editions adapted to the principal divisions of our country in the calculations, &c. have been printed to supply demands from any quarter of the Union. It contains 32 pages closely printed matter, and will be furnished to order at the lowest possible rates. Orders addressed to LUTHER TUCKER, Albany, Publisher of the Cultivator.

FAIRS THIS MONTH.—Cattle Show of the American Institute, on the 18th and 19th.—Herkimer Ag. Soc. at Herkimer, 10th.—Washington Co. Ag. Soc. at Argyle, 10th and 11th.—Steuben Ag. Soc. at Bath, 18th.

MARYLAND AG. SOCIETIES.—The Baltimore Co. Society hold their next Fair at Govanstown, on the 18th, 19th and 20th of October—the Prince George's Society at Upper Marlboro, Nov. 1, 2.

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FRUIT TREES.

THE subscribers are now ready to receive orders for superior Trees, viz: Apples, Plums, Pears, Cherries, Peaches, &c. &c., from their new nursery. Trees are all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention. WILSON, THORBURN & TELLER.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

Orders left with WILLIAM THORBURN, Seed and Agricultural Repository, No. 38 Broadway, Albany, will be promptly attended to. *Albany, Oct.* 1, 1843.—2t.

FRUIT TREES,

OF thoroughly proved varieties only, consisting of a superb collection of *Peaches*, and a fine assortment of Apples, Cherries, Nectarines, Apricots, &c., for sale at the Nursery of THOMAS & SMITH, Macedon, Wayne co., N. Y.

The Peaches consist of about 12 varieties, selected with great care from 60 or 70 proved sorts, chiefly from some of the best nurseries in the United States, ripening nearly in the following order:—Early Tillotson, Large Red Rareripe, Early York, White Imperial, Royal Kensington, Yellow Alberge, Seabolt's, Malacotoon, Old Newington, Hill's Chili, Late York, Heath Cling, &c.

Among the Apples, are Yellow Harvest, Sine Qua Non, Buffington's Early, Strawberry, Ramho, Gravenstein, Ribston Pippins, Bellflower, Esopus Spitzenburg, R. I. Greening, Swaar, Tallman Sweet, &c. &c. Price of peaches and apples, 25 cts. each,—$20 per 100.

Of Apricots, [a fruit nearly equal to the best peaches, and ripening weeks before them, are Breda, Musch, Peach, Early Peach, Black Apricot, &c. 37½ cents each.

New catalogues, with full lists and practical directions, furnished gratis on all [*postage free*] applications; and being strictly periodical, postmasters may order them.

Trees packed in the very best manner for railroad and canal transportation. *Oct.* 1, 1843.

FOR SALE.

WILL be offered for show and for sale, at the New Jersey State Fair, held at Patterson, on the 16th and 17th of October next, the Premium Stallion TOP GALLANT, Jr. five years old last May, sixteen hands three inches high, a beautiful bright bay, entirely free from white. He was got by old Top Gallant, and he by old Whalebone, and he by Granby, and Granby by old imported Messenger; his dam a blooded mare, and very fast trotter.

This unrivaled horse was exhibited on the 26th day of November, 1839, at the Musconetcong Agricultural Society, and received the silver prize medal, as a premium for the best colt under three years of age; and on the 5th of November, 1840, the premium was again awarded to him as being the best colt over one and under three years of age; and again in October, 1841, at the great Fair of the American Institute, held at Niblo's Garden, New-York, although at the age of three and a half years, and being much fatigued in traveling, was awarded the second premium, and considered by judges the best horse of his age in the United States. A few desirable points I think worthy of notice, which he possesses. He has a small neat head, and handsome set ear, a bright hazel eye, a most beautiful arched neck, short strong back, wide deep chest, lung under the belly, and a powerful stifle, legs moderate as to length, very smooth and flat, joints strong and compact, and although well proportioned, yet he possesses all the action of the thorough bred race horse.

To gentlemen wishing to obtain the best stock horse—so allowed by competent judges—there is now in the United States of his age, they then can have an opportunity of doing it; as perfect satisfaction can then be given to his soundness, stock and service, and perhaps some of his colts may be there, which will show for themselves. SPENCER C. SMITH.

Bloomsbury, N. J., Oct. 1, 1843.

SOUTH DOWN SHEEP FOR SALE.

HAVING, with my son, concluded to make an agricultural visit to England, and perhaps the Continent, with a view of becoming acquainted by personal observation with the greatly improved cultivation of the soil, and more especially to examine our favorite departments of *Stock* and stock breeding, it has been thought best to dispose of the principal part of our South Down flock, consisting of Ewes, Lambs and Bucks, all of which are exclusively bred from the Glynde and Babraham flocks of John Ellman, Esq. and Jonas Webb, Esq. in England. More than this need not be said for their purity of blood and excellence of descent. The flock is in the most perfect health, and we think it will be conceded, when seen, that the produce is in no way inferior to the imported sheep; but it was advisable to sell them, that the farm should not become overstocked during our absence.

Mr. THOMAS HOLLIS of Gilbertsville, Butternuts, will take charge, and make sale of them on the ground selected for the Agricultural exhibition of the American Institute, to be held in New-York, on the 18th and 19th of October, when the flock will be exhibited and sold without reserve.

FRANCIS ROTCH.

Butternuts, Otsego co., N. Y., Oct. 1, 1843.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

WARREN'S NEWLY INVENTED HORSE POWER AND THRESHING MACHINE.

THE prices of these highly valuable machines, are as follows, viz:

For a Two Horse Power and Threshing Machine, together, $75
" One " " " " " 60
" Two Horse Power Machine, alone, ... 50
" One " " " " 40

Payment to be made in this city, on delivery of Machines. Bands not furnished except by particular order—price $4 each. Orders, post paid, executed promptly.

L. Bostwick,
J. Plant,
W. T. Cole.

L. BOSTWICK & CO.
58 Water st.

New-York June 17, 1843—jytf.

POUDRETTE.

CHEAPER STILL—Seven barrels for $10, and eleven barrels for $15, for this fall's use on Wheat and Rye—in order to show its great value for those crops. Orders will be executed immediately on receipt of letter, or personal application with the money, to D. K. MINOR,

Aug. 1, 1843.—3t. 23 Chambers st., New-York.

PLATT'S PATENT PREMIUM PORTABLE MILL

For Grinding all kinds of Grain, Spices, Drugs, Paints, &c.

THE subscribers have been recently appointed general agents for the sale of the above most valuable mills in the state of New-York; also for the sale of patent rights in the patent. Price of 12 inch machine, $40; of 15 inch, $60; of 18 inch, $100; of 24 inch, $110, payment to be made on delivery.

All orders—post paid, if by letter—will be punctually attended to. Samples of the mill may be seen at their office.

3t. L. BOSTWICK & CO., 58 Water-st., New-York.

AGRICULTURAL INSTITUTE, BRIDGEPORT, CT.

THE REV. B. G. NOBLE intends to commence an Agricultural Institute on his farm in the town of Bridgeport, on the first Wednesday of October. The system of education will be adapted to the wants of youth designed for the pursuits of agriculture. It will include the natural sciences, in their connection with agriculture, and all the higher branches of an English education.

The winter term will commence on the first Wednesday of October, and the summer term on the first Wednesday of May, and will each continue 22 weeks.

Expenses for board, tuition, washing and fuel, for a term, $80. Payments quarterly, or for the term, in advance. If not provided by the pupil, there will be a small charge for bed and bedding.

Only ten pupils can at present be accommodated. Application to be made to Rev. B. G. Noble, Bridgeport, Conn.

Bridgeport, August 15, 1843.—2t.

MT. HOPE BOTANIC GARDEN AND NURSERY.
ROCHESTER, N. Y.

THE proprietors of this establishment offer for sale an unusually fine assortment of Fruit Trees, comprising the choicest varieties of Apple, Pear, Peach, Plum, Cherry, &c. now cultivated.

The trees are of good size, exceedingly thrifty, and free from diseases of any kind. The stock of Cherry and Peach particularly is very large and of beautiful growth.

They have also on hand an excellent stock of *Ornamental Trees and Shrubs, Green House Plants, Bulbous Roots, Double Dahlias and Roses.*

The latter embraces the most desirable new varieties of the *monthly* Bengal, Tea scented, Bourbon and Noisette, and of the *hardy* Province, Damask, Moss, Hybrid, China, &c., and of the magnificent climbing varieties of Ayrshire, Boussault and Rubifolia, including the splendid new *Double Michigan.*

The proprietors pledge themselves to execute all orders they may be favored with in the most satisfactory manner. The utmost care is taken to have every parcel that leaves the nursery properly packed and shipped.

Catalogues will be forwarded, gratis, to all applicants, and may also be had at the office of the Cultivator in Albany, and the New Genesee Farmer in Rochester, and at the several agencies of the Rochester Seed Store in the country.

It is particularly requested that all orders be forwarded as early as possible, (say before 10th October,) so that they may be executed as soon as the season will admit.

A remittance or satisfactory reference is invariably required.

Address, post paid, ELLWANGER & BARRY,
Rochester, N. Y.

Sept. 1, 1843.—2t.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. X.—NO. 11. ALBANY, N. Y., NOVEMBER, 1843. CULT. & FAR. VOL. IV.—NO. 11.

PUBLISHED MONTHLY.

GAYLORD & TUCKER, EDITORS.

LUTHER TUCKER, PROPRIETOR.
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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete setts of the back volumes, can always be obtained.

One Dollar per annum—Six Copies for $5.
(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and 25 per cent commission on 100 or more.
Subscriptions to commence with a volume; and the money to be sent free of postage.

THE BACK VOLUMES OF THE CULTIVATOR,
Handsomely stitched in printed covers,
Can be furnished to new subscribers—Vols. I. II. III. IV. at 50 cents each, and Vols. V. VI. VII. VIII. IX. at $1. each.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

TO THE PUBLIC.

THE publisher of *The Cultivator* informs the friends and patrons of that journal, that it his intention, at the commencement of the next volume in January next, to make such improvements in the mechanical execution of the paper, as can be effected by new type and a new and improved steam press, purchased expressly for its use. Of the character of the Cultivator it can scarcely be necessary to speak, at this time and place. From its commencement it has taken the highest place in the list of journals devoted to the cause of the farmer; and in its series of volumes, forms perhaps the best agricultural library of the day. Its numerous and increasing list of contributors, unrivaled in extent and ability—the ample means in the power of the editors to give the most early and complete record of every thing that can interest the farmer, or aid in forming a correct opinion of the condition and progress of agriculture, and its extensive circulation, exceeding that of any similar journal in the world, has caused it to be looked upon as the principal exponent of agriculture in the country. In the amount of agricultural reading—in its numerous and effective engravings and illustrations, and in its unwearied efforts to inform the mind and elevate the condition of the farmer, no efforts will be spared to make the next vol. superior to any that have preceded it.

At the same time, the proprietor of the Cultivator will issue a new paper, to be called

THE FARMER'S MUSEUM.

It will be printed in the same condensed and beautiful manner as the Cultivator, but will contain only 16 octavo pages, or one-half the quantity of the former.

Public opinion seems to have decided that a 50 cent paper is necessary; and from all parts of the country the proprietor of the Cultivator has been urged to undertake the publication of such a journal. The favor with which the Monthly Genesee Farmer was viewed, the great good it was accomplishing, and the extensive circulation it had attained, while conducted by him, is considered a proof that a similar cheap publication, *made up from the ample pages of the Cultivator*, and practically adapted to the wants of the thousands whose moderate means prevent the receipt of more expensive journals, will be hailed as a desideratum by the farming public.

By an examination of the terms annexed, it will be seen they are such as is believed will make it an inducement for individuals to act as agents in procuring subscribers to these works. There is scarcely a neighborhood, or town, in which an active person, interested in the cause of agriculture, may not in a short time obtain from 20 to 100 subscribers; and we would suggest that there are hundreds of young men, who might spend in this way a few days or weeks, with greater profit to themselves, and perhaps more advantage to others, than in almost any other. Our numerous friends and subscribers in all parts of the Union and the Canadas, are respectfully requested to aid the cause of agriculture, by bringing the contemplated change in the old, and the establishment of our new publication, to the notice of their neighbors. Postmasters, and others, who have heretofore so kindly interested themselves in our behalf, will add greatly to their present claims on our gratitude, by continuing to receive and forward the names of those who may wish to become subscribers. The many Editors with whom we exchange, will greatly oblige us by calling the attention of their readers to our new arrangements. As no means, or expense, will be neglected to sustain the present high reputation of the CULTIVATOR, and render the MUSEUM worthy a place in the home of every farmer, and as the terms adopted are such that an extensive circulation only can afford remuneration for either, it is hoped an early and cheerful response will be made to this appeal, and a list of subscribers forwarded, such as it is believed these journals will deserve.

TERMS OF THE CULTIVATOR.

Single copy $1,00—Seven copies for $5,00—Fifteen copies for $10,00.

TERMS OF THE FARMER'S MUSEUM.

The Museum will be printed on a sheet just one-half the size of "The Cultivator," 16 pages, large octavo. Single copies 50 cents—Fourteen copies for $5,00—Thirty copies for $10,00.

☞ All subscribtions must commence with the vol. at the commencement of each year; and all orders must be accompanied with the money, and come free of postage; as the exceeding low rates at which the papers are published, forbid the risk and loss heretofore sustained by crediting the paper to Agents.

☞ A specimen number of the FARMER'S MUSEUM, together with Prospectuses for both our papers, will be issued and forwarded to our friends about the middle of this month, and we shall also be glad to forward them to any one disposed to aid us in our efforts by promoting the circulation of either of our papers.

MONTHLY NOTICES.

COMMUNICATIONS received during the last month:—Sanford Howard, A Subscriber, S. W. Jewett, J. S. Skinner, E. W. Brewster, L. A. Morrell, Wm. Jennison, D. O. Prouty, J. W. G., E. G. Johnson, T. C. Peters, K. L., C. K., Editor Far.'s Encyclopedia, Georgius, C. J. Ryan, A Farmer, M. Adams, G. D. Strother, Thomas Affleck.

ACKNOWLEDGMENTS.—We are indebted to Maj. E. KIRBY, Brownsville; O. PALMER, Buffalo; T. C. PETERS, Darien; F. J. BETTS, Esq. Newburgh; JAMES GOWEN, Esq. and J. PEDDER, Philadelphia; J. S. SKINNER, Esq. Washington City; J. R. SPEED, Caroline; W. RISLEY, Fredonia; Dr. J. P. BEEKMAN, Kinderhook; S. HOWARD, Zanesville; and LEVI DURAND, Derby, for various pamphlets and papers, containing accounts of Cattle Shows, Ag. Addresses, &c. In our next, we will endeavor to give such notices and extracts from these papers as our limits will admit. In the meantime we shall be glad to receive from our friends in all sections of the country, copies of papers containing accounts of Cattle Shows and Addresses before Ag. Societies.

We are indebted to our friends in London, for our usual files of the *Mark Lane Express*, the *Farmer's Journal*, the *Farmer's Herald*, *Farmer's Magazine*, &c.; and to G. W. ATWOOD, American produce commission dealer, No. 1 London st., Mark Lane, for his monthly circular, and for several nos. of the *London Times*, containing articles of interest on the subject of agriculture.

☞ The package from R. Sinclair, Jr. & Co., Baltimore, has come to hand. We shall make use of some of the articles in our next.

AGE OF CATTLE.—*M. E. W.* is referred to the first page of our last no. for an explanation of the remarks to which he alludes.

Lansingville can obtain the grass seed he wants, of Wm. Thorburn, seedsman, of this city, at about $2,00 per bushel.

THE CULTIVATOR ALMANAC.—We can hereafter only supply orders for this Almanac with astronomical calculations for New-York city. Another year we shall endeavor to print enough to supply all demands from every section. 28,000 copies have been sold in the last two months.

EARLY CALF.—A subscriber at Jordan, in this state, in a late letter, says—"I have a fine grade Durham, that had a fine heifer calf the 13th of May last, being at that time only 13 months and 14 days old. Both are doing finely."

☞ The journal to which we alluded in our notices for the month of September, has, in its issue for October, occupied some two or three pages in an attempt at a reply to our brief remarks. We find in it nothing to induce us to alter the determination expressed by us. The reply is written in the querulous dissatisfied tone of a man who stands self-convicted of serious error or wilful misrepresentation, and who finds his positions at variance with fact, common sense, and public opinion. What else could induce him to persist in misrepresenting us, as he now does, when he says—"The Cultivator asserts that the reputation of being good milkers does not belong to the Short Horns;" when what we actually said was this: "The old Short Horns were the best milking breed in England—a reputation which, as a whole, certainly does not belong to the improved breeds." We think the editor greatly underrates the discernment of his intelligent readers, if he supposes they are not able to see a great difference between saying that a breed, as a whole, is not the "*best*" for milk, or saying that it is not "*good.*" For the fact as stated by us, every well informed breeder knows that we have the highest and most positive English authority; and the reason for this state of things, we gave in full, in our July article.

We may here state that the opinions put forth by us in that paper, as to the actual value and great importance of the Short Horns as a base for the improvement of our stock, and the best method of effecting such improvement, have received the approval, so far as we have learned, of every practical breeder in the country. We have room for only the following extracts from the many communications we have received relating to this matter. In regard to the charge that the Cultivator was inimical to the Short Horns, one of the most extensive breeders and owners of this stock in the U. States, says: "The only jealousy I have ever felt on the subject, was that the Cultivator might be considered too partial to them;" and as to the effect of crosses in the improvement of stock, a gentleman who has been, and is now, largely engaged in breeding both pure bloods and grades, says: "The ground you have assumed is the true one, and cannot be shaken; it is borne out by common sense, and the practical experience of thousands."

MULTICOLE RYE.—James Magoffin, Esq. of St. Stephens, Alabama, states in a letter to the American Farmer, that he recently conversed with a gentlemen lately from France, who informed him that the account of the Multicole Rye given in our Aug. no. is perfectly correct, and that its value to the farmer is truly great. Will not some of our seedsmen import some of the seed?

MAPLE SUGAR.—We have been favored with the sample of the maple sugar for which the first premium was awarded at the late State Fair, by Mr. JOEL WOODWORTH of Watertown, Jefferson co., the manufacturer. It far exceeds any we have before seen, both on account of its whiteness, approaching to best refined loaf sugar, and in excellence of grain and flavor. No premium awarded at the Fair was better deserved. We shall hereafter give Mr. W.'s statement of the manner in which it was made.

THREE FURROW PLOW.—We were recently invited by the inventor, Mr. C. THORPE of Binghampton in this state, to examine a "three-furrow plow," he has the past season brought into use in Broome county. It is intended mainly for a seed coverer, for which we should think it would answer an excellent purpose. It may, however, be used as a common plow on light soils, where a greater depth than four or five inches is not required. In the arrangement of the plows, and the facility with which it may be guided, it is svperior to any thing we have seen. We shall endeavor to give an engraving of it hereafter.

CORN HILLER.—Mr. THORPE also showed us an implement which he calls by this name, calculated for plowing and hilling any kind of hoed crops by once running between the rows.

KENTUCKY CORN.—We see it stated in the western papers, that Gov. Shelby of Kentucky, has a field of 100 acres in corn, which it is estimated will yield at least 100 bushels per acre. The corn is planted four feet apart each way, and four stalks in each hill. This would be the same as drills 4 feet apart, and the stalks 1 foot apart in the drills. The crop of the Messrs. Pratts, of Madison, was in drills five feet from center to center, each drill containing three rows of single stalks, two feet distant from each other. The yield was 170 bushels per acre. Much is yet to be learned as to the best manner of cultivating this great crop. [For continuation of these notices, see page 183.]

TRANSACTIONS OF THE FIRST NEW-YORK AGRICULTURAL SOCIETY.

We have lately re-examined the volumes published by this Society, and have been surprised at the mass of valuable facts the distinguished men engaged in its support, were at that period able to accumulate and publish. No farmer can take up these volumes without at once perceiving the vast debt we owe to the Livingstons, De Witts, L'Hommedicus, Clintons, Mitchells, &c. &c., who formed the first association for the promotion of agriculture in this state, and in the expenditure of labor and money did so much to elevate the art to its proper place. As proposed in a late number of the Cultivator, we shall give brief notices of some of the most important papers to be found in the series.

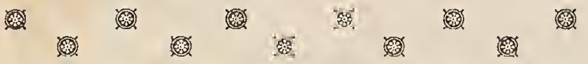
In the first vol. page 71, is to be found a paper on the *Hessian fly,* and much as has been written on the subject since, very little addition has been made to the mass of information contained in this paper. It is from the pen of J. N. Havens, Esq. Mr. Havens' statements agree with our experience and observations, viz: that the fly undergoes in most cases two transformations, or becomes a perfect insect twice a year, depositing its eggs both fall and spring. The egg laid in the fall sown wheat is hatched, and the insect remains in the chrysalis state through the winter. In the spring it emerges a perfect insect, and from the eggs then deposited, are produced the insects which are ready to attack and destroy the fall wheat. Burning the stubble, or plowing it under carefully and deeply, is recommended by Mr. H. Burning we have not tried, but deep plowing the stubble immediately after harvest, we know to have a good effect.

It is to the experiments of Chancellor Livingston upon *Gypsum,* their varied nature, and the uniform success that attended them when made in connection with clover, that we are mainly indebted for the revolution and improvement in agriculture consequent on the clover and plaster husbandry. The paper in which he records his experiments, commencing in 1789, is one of the most interesting in the volume. The inferences to which the Chancellor was led, viz: that plaster produces the best effect when used in connection with clover—that it is comparatively useless on wet moist soils—that its action is very little aided by the natural fertility of the soil—that on dry soils it is of great value to Indian corn—and that in most cases it produces no effect near the sea, are such as experience has confirmed. From some of his experiments he was led to infer that 8 bushels of pulverized limestone was equal in effect to 6 bushels of gypsum, but on clover, we are confident the disproportion would be found far greater than this.

The paper of Mr. L'Hommedieu, on the *Preparation of Manures,* contains many hints that could scarcely fail of improving the practice of our best farmers. His remarks on composts made of turf and barnyard manures, swamp mud, leached ashes, &c., are so much in advance of the age in which they were written, that they seem rather to have been penned by a contemporary of Liebig and Dana.

At the time this volume was prepared, the growing and preparation of *Clover Seed* for market, was much less common than it now is, and Suffolk, on Long Island, produced and sold more than all the rest of the state. Mr. L'H. gives a paper on gathering and threshing it, from which it appears in the modern mode of threshing and cleaning by water or horse power, a vast saving of labor has been effected. Mr. L'H. says the greatest quantity he has known grown on an acre, was four bushels and sixteen quarts. Such a product as this, any where, would be considered enormous.

In this volume is an account of a crop of *Indian Corn,* raised at Hoboken, by Mr. J. Stevens, amounting to 118 bushels, 2 quarts per acre. This crop and another were raised on a wager, were measured accurately, and the result excited much attention, it being one of the first of those large crops of that grain that have now become so common. Mr. Stevens planted his corn in double rows, 5½ feet apart in this manner:



The sides of these triangles being 7 inches. The corn was dibbled 3½ inches deep, one kernel in a hole, which was then filled with rotten dung.

One of the earliest as well as ablest memoirs on the *Salt Springs* of the state, is to be found in this volume, from the pen of Dr. B. DeWitt. To us who have so long been conversant with that section of country, his description comes with the freshness of our early impressions, and we almost forget that more than 40 years have passed since we first heard of Salt Point, or the paper before us was written. One of the most remarkable changes in the vicinity of the Onondaga Salines, which has taken place since Dr. DeWitt examined the district, is in the health of the region. The town of Salina now contains a population, of some 12,000; and the number of deaths annually, does not greatly exceed that which existed at the time Dr. D. wrote. The cultivation of the country, the lowering of the lake, and the draining of the swamps and marshes, have conferred a degree of salubrity rarely equaled. One cannot avoid recognizing the advantages of the late geological survey and explorations of the state, when they contrast the knowledge acquired, with the crude speculations as to the source of our brines so current at that time. The quantity of salt made annually, (1797,) is estimated at 60,000 bushels. The product of this year, 1843, will not vary far from four millions of bushels.

Simeon DeWitt has given his method of *Preserving Butter,* so as to avoid the rancidity so common and so disagreeeable. A cask of sufficient size is provided, into which brine made from good salt, as strong as possible, a little saltpetre added, and then boiled and skimmed to insure purity, is poured, after the vessel has been previously soaked and washed in another brine. The butter is then made into suitable rolls, as it comes from the dairy or is purchased in the market, and put into the brine. To keep this butter perfectly under the brine, and on this the sweetness is mainly depending, a circular board of nearly the size of the cask is provided, in the center of which a round stick is secured, the upper end of which rises above the cask. Two wire staples are driven into the top of the cask, and a cord passing from one through or over the top of the stick, and secured to the other effectually, keeps the butter below the surface of the brine.

We think this a good method of keeping butter sweet, but the best method we have yet seen tried, is to pack the butter while perfectly sweet, in firkins, headed up close, and then throw them into a vat supplied with spring water of a low temperature, or else into a well of the same kind. Exclusion of air and a low temperature, are thus both secured, and these points gained, hutter well worked and sweet, may be kept so for an indefinite period of time.

Nearly 100 pages of the 2d volume are occupied by a series of papers on *Sheep,* by Mr. Livingston. Mr. L. was among the first introducers of the Merino into this country, and we here find one of the earliest descriptions of this sheep, quality of wool, and its probable effect on the improvement of our native sheep by crosses. What was theory in Chancellor L., has become fact in practice, and though his labors were decried and underrated by many, the result has been felt in every part of the U. States. The agriculturists will not be apt to forget the man who was mainly instrumental in bringing gypsum into use, and introducing the Merino into the country, and this distinguished honor can fairly be claimed for Mr. Livingston.

There is a valuable paper on the cultivation of *Hemp,* from the pen of James Geddes, Esq. of Onondaga co., but the expectations which were at one time entertained of the extensive culture of this plant in western New-York, have never been realized. It was found that other crops more easily grown, would be more profitable, and that the opening of the Erie canal, by bringing this district so much nearer a market for such products, soon caused a total suspension of the hemp culture, where it had been attempted.

Soaking Seed Wheat in brine, and then drying it in lime, to prevent smut, was first brought before the farmers of New-York in these volumes, and wherever adopted produced the happiest results. The public spirited farmers on the east of the Cayuga lake, early availed themselves of this preventive, and with such success, that large quantities of Cayuga wheat found its way to other places for seed; and it was for years, and perhaps still is, believed by many, that the practice of brining and liming originated in the district named. Strange as it may seem, with all the certainty of exemption from smut this treatment of wheat offers, there are very few farms where the practice of liming is so carried out as to effectually exclude smut from the fields. Greater attention to this point would be for the benefit of all parties concerned.

One of the most destructive insects to the grain grower in the southern and middle states, and occasionally farther north, is the true *Weevil,* which attacks the wheat in the sheaf or the bin. Mr. L'Hommedieu states that this insect may be driven from granaries, mills, &c., by sprinkling over the wheat fine unslacked lime, five or six handfuls to every five bushels, as it is shoveled into the bins. When wanted for use, the fanning mill will blow off the lime, as well as the dust made by the weevil from the wheat. Wheat we understand is now successfully preserved in the south, by heating a hogshead turned bottom upwards over a coal fire, as hot as it can be made, and while hot, filling it with wheat and heading it carefully up. This destroys what weevils there may be in the grain, and effectually excludes others from entering.

The papers of the 3d volume are on the whole of a less practical cast than those of the former volumes, though on subjects of interest to all farmers it contains some articles of great value. Among these is a paper on the qualities and manufacture of *Flour,* from the pen of that experienced dealer, J. Humbert, of New-York. Many of the complaints he states as existing against N. York flour, are now done away, the flour of western New-York being unrivaled in all the qualities that constitute a first rate article; but there is a vast deal of wheat ground for families and for market, where the product is seriously damaged, and the life of the flour killed by bad grinding. If in grinding wheat or corn, the stones get heated to such a degree as to raise the temperature of the flour to any considerable extent, the flour is surely hurt. It may be cooled immediately, and farther damage checked, but the mischief done is not remedied. Too fine or close grinding is also injurious to the quality of flour, and this is particularly the case where millers pass the shorts or a large part of the product a second time through the stones. The effect of close grinding will be seen more readily on corn than wheat, in spoiling, or rendering such corn meal unfit for bread. The best corn cakes or bread, is always made from meal ground only moderately fine. Too close grinding destroys its value for cooking in the estimation of all who are best acquainted with this grain. We are glad that public attention has been called to this subject, as the proper grinding of wheat and corn, is a question of vast importance to the community.

There are papers from E. C. Genet, on several subjects, in one of which he describes the benefit he derived from feeding some valuable, but diseased and weak *Merino Sheep* with milk. Their restoration was complete, and what was singular, while the rest of his flock suffered severely from the scab, the milk fed sheep were perfectly exempt. In Switzerland, and some parts of France, the best vinegar is made from the whey of milk, by a very simple process. The whey, carefully clarified, is poured into casks, with aromatic herbs and elder blossoms, to give flavor and color as desired, and exposed in open air to the sun, where it soon acquires an uncommon degree of acidity. We think that in the newly settled parts of our western states, where cider for vinegar is not to be had, this method of providing an article so essential to the health and comfort of a family, might be found useful.

The opinions and the facts advanced by Prof. Brownell, on the *unfitness of Great Britain for the growth of Fine Wool,* have been fully established by long experience, and by the universal failure of every attempt that has been made to produce pure Merino or Saxon wool in that kingdom. Experience, too, has demonstrated that in no part of the world can better or finer wool be grown than in the U. States; and every year is adding proofs to our vast resources in that respect, particularly in the adaptation of the western states to its production.

The 4th volume is divided into two parts, and both are filled with papers of great practical value to the farmer. One of these is a description of the manner of cultivating the *Peach* at the south, by James Geddes. He thus notices the method there adopted to avoid the attacks of the peach borer, and which would doubtless be as effective here as there. "To prevent these insects from operating on the softened bark near the surface, a hill of earth about a foot high, is raised around each tree about the first of June, and taken away about the first of September. The insects either find the bark too hard and dry to pierce, or the taking away the earth leaves the eggs uncovered and they perish; the fact is, that after ten years trial, Mr. Bayly has found his trees thus completely preserved against the worms."

Mr. Durkee mentions that he has twice killed patches of the *Canada Thistle,* by covering them with straw to the depth of four or five inches. This was done in the spring when they were about six inches high, and care was taken that the straw was not disturbed. We have often destroyed small patches of them in this way, using wheat, pea, or other straw for smothering them, but we have always used it more liberally than is recommended by Mr. Durkee. Where the thistle has but just taken root, perhaps this is as good a method of exterminating them as can be tried; but repeated cuttings, so long as they continued to vegetate, has been the most certain remedy with us.

Inquiries are frequently made as to the best method of germinating the seeds or haws of the *Thorn;* the following, condensed from a paper by Mr. Tibbits, will we think be satisfactory. Collect the thorn berries when ripe, and lay them in a pile mixed with a small quantity of rich warm loam, in a place in the garden somewhat shaded by a fence or tree. In the next summer, turn the mass with a shovel, that the whole may be equally exposed to air and frost. In the second spring, when they have been exposed to the frosts of two winters, and the air of one summer, and as early as a bed can be made for their reception, spread the seeds with the mixed loam over a bed of rich, warm, clean earth, when the good seeds will soon sprout and grow. Some of the plants will grow two feet, and may be set in hedges the next spring, while the smaller ones may stand till the next year before they are transplanted.

The following directions for *Preserving Fruit,* given in this volume, are from the pen of Mr. Knight, the celebrated British horticulturist: "The most successsul method of preserving pears and apples, which I have hitherto tried, has been placing them in glazed earthen pots, each containing about a gallon, and surrounding each fruit with paper; but it is probable the chaff of oats, if free from moisture or any offensive smell, might be used with advantage instead of paper, and at less expense or trouble. These vessels being perfect cylinders, about a foot each in height, stand very conveniently on each other, and thus present the means of preserving much fruit in a small room; and if the spaces between the top of one vessel and the base of another, be filled with a cement composed of two parts of the curd of skimmed milk, and one of lime, by which the air will be excluded, the later kinds of apples and pears will be preserved with little change in their appearance, from October till March. Dry cool situations, are the best for the preservation of fruit."

We have thus made a hasty sketch of some of the papers in these volumes that record the labors of the first State Ag. Society of New-York. The effect of these labors we feel at the present day, in the impulse they gave to agriculture, and the spirit of inquiry and investigation they produced. The leading spirits of this association were men of powerful minds, far-reaching in their views, and in their practive evidently in advance of their age. It is gratifying to trace in these volumes the germ of some of the great improvements of the times; to behold suggestions and inquires expanding into practice and facts; to see where we in our husbandry have improved on the old, or introduced new methods in culture; and in particular to observe the vast advance there has been made, since these volumes were published, in most of our agricultural implements.

New-York State Agricultural Society.

DR. BEEKMAN'S ADDRESS AT ROCHESTER.

Fellow Citizens—The place that I now occupy, and the address to be made, I did hope would have been confided to some other and abler man. Individuals have been named for it whose reputation for talent and eloquence would have done more justice to the cause and better suited the occasion. But, as we could not control their action and this duty was to be discharged, it has fallen to my lot to address you. This notice on my part at this starting point is the more necessary, as on the two preceding anniversaries of this Society, we had the pleasure on one occasion to listen to that veteran of eloquence, the president of Union College, and on the other to the pertinent and glowing delineations of our then Governor.

The yearly exhibition of American skill in the products of the farm and the workshop, is completed. What remains to be done is for us to commune together a few moments on the great theme on which it is our delight to dwell, and then to bestow the civic prizes that have been so nobly and honorably won. I trust, however, we shall not soon lose the impressions created by the satisfactory display we have just witnessed: those impressions are to be taken home to occupy our evening thoughts, and to be hereafter a subject of fruitful remark and amicable discussion. What can be more natural and what more gratifying?

The exhibition is the evidence of our skill. To think and talk about it, will as necessarily follow, as the desire to outstrip, hereafter, all that has gone before us, is inherent in the breast of man. Our object then is accomplished.

You see the position which we now occupy as an agricultural community, and we ask you to lend your aid to the farther advancement of the great cause in which we are engaged. In this assemblage, who is there that would not rejoice in a prize this day, as the testimonial of his industry and skill? Who would not wish to stand before his neighbors and friends, and receive from the judges the civic crown that well directed exertion is sure to win? Is that man present? If so, point him out to me, and I will show you a man not fit to associate with American freemen, nor hold converse with the farmer of my country. He has no business here. If you find him, go to his home and you will soon perceive he has left the footprints of his husbandry behind him, in his broken fences, dilapidated buildings, and all else that constitutes him a bad farmer and a worse neighbor.

But, we will turn from this subject, and take a hasty view of the operations of the Society, since we have had an organization. It has been in existence since 1832. A short time previous to that period, a circular was issued by a few friends of agriculture, and a meeting proposed to be held in the city of Albany, in February of that year. A few individuals met for that purpose, and although the farmers generally did not attend, yet it was gratifying to see that the spirit was there; for we had gentlemen at that meeting from different parts of the state, who had traveled from two hundred to three hundred miles in the depth of winter, and thus gave evidence of their zeal and of the benefits which they expected would result to the farming interest from associated action.

Some of the first men of the state were there, and mixed with others, who had more intelligence than fame.

The Society was formed, and Mr. Le Ray de Chaumont chosen its first President. The public mind had not been sufficiently prepared to give it a hearty and welcome reception. The objects of the Society were not generally known, and few persons offered their names as members. To overcome this difficulty and enlighten the public as to our objects, we came to a determination to establish a paper devoted solely to the advancement of Agriculture. This gave birth to the "Cultivator," a paper started in Albany, in March, 1834, as the organ of the Society and its medium of communication with the public. How far it has sustained the cause for which it was established, most of you, I trust, have been able to judge, as it soon gained a circulation of many thousands. True, it was chiefly edited by a man of uncommon intelligence, and with whom farming was a favorite pursuit, and who has left behind him a name unspotted, and a fame as enduring as the pursuit of Agriculture will be beneficial and lasting.

Yet its effect in increasing the members of the Society did not meet the expectations of its friends, and for many years we struggled through discouragements that would have disheartened less determined men. We knew we deserved success, and were determined to accomplish it. We had confidence in the good sense of our farming community, and that when they fully appreciated our object and efforts, they would give us the encouragement we deserved.

Our first Fair was held in Albany, in 1834. It was an exhibition creditable to us as a first essay, but not such as we had a right to expect from a state as wealthy, intelligent and populous as ours. These fairs were annually continued with varied success, while we were slowly, yet steadily, gaining the confidence of the public. Two years ago, we determined to give more scope to our operations and throw ourselves more fully on the liberality and intelligence of our farming and mechanical community, and appointed a Fair to be held at Syracuse.

How far we were successful, most of you, through our agricultural journals, and the ordinary newspapers, have been informed. Suffice it to say, it was cheering to the hearts of the friends of the Society to witness, as we did on that occasion, the complete success that crowned our efforts. We saw there congregated the choicest collection of animals, brought from the most distant parts of the state—a large assortment of the varied farm implements, made after the most improved models, and with excellent skill, together with a great variety of articles, the product of the work shops, and evidences of the ability of the manufacturer. To the best of these several specimens, suitable premiums were awarded, and I hope the gratification witnessed on that day, in the thousands there assembled, has not been suffered to lose its influence in awakening this western community to the great benefits that must result from this most laudable competition. What can be more gratifying to the farmer, than an exhibition of the best specimens of all the different animals necessary to him in the profitable cultivation of his farm?—the varied farm implements made with consummate skill—the manufacture of a thousand articles, beautiful in themselves, but more beautiful collectively, and intended for his use or his enjoyment? These are seasons to him full of instruction, for he sees perfection as far as human ingenuity has reached, and profits by the lesson. When at home he looks upon his own as almost perfect, but here he is astonished that his humble efforts fall so far short of what he sees before him, and if he is a man of sense and reflection, he determines to carry home with him a new stock of ideas thus gained, and engraft them upon his own, by adopting the improvements every where manifest. The man who cannot profit by these lessons, is either very stupid or very conceited, and in either case is a bad specimen of the American character.

In the autumn of 1842, the Fair of the State Society was held at Albany. The collection of animals was larger than at Syracuse; so it was of farm implements, of the products of the field, the vineyard and garden; the manufacture of all sorts of carriages, and all that pertains to them, and a vast variety of things called for either as articles of necessity or luxury—all most beautifully made. It was an exhibition as pleasing to the farmer as it was to the American patriot; for he had the evidence before him of the skill of his countrymen, and of his independence of the foreign manufacturer. There, too, we saw collected the intelligent friends of agriculture, mechanics and manufactures, from different parts of the Union—from the east, the south, the remote west, and her Majesty's possessions in Canada. Truly this meeting was an intellectual feast, and it was one of those great occasions that do more to give vitality to the cause and carry it onward, than years of steady plodding labor. I trust the occurrences of the three days spent at that time will not soon be forgotten, and that the gentlemen from other states who honored us with their presence, and encouraged us with their remarks and example, have themselves carried home a conviction, from the display there witnessed, that the sons of the Empire State are alive to her great interests and not wanting in ability to develop them; that they know how to make the best use of her numerous railways, her extended canals, her noble lakes and rivers, to give efficiency to the industry and hardihood of her population, and to increase the fertility of her soil.

The state of New-York, from her size, her position, and her natural advantages, is most happily situated to avail herself of the great benefit these confer; and whether individuals, for the purpose of agriculture, are located in her eastern, middle, or western portions, there is still a greater equality of advantages than one at first sight would suppose. The city of New-York is the great market for all, the Hudson river and the Erie canal the viaducts that lead to it. The Hudson river farmers boast of their easy and quick communication with it—the western farmers, of the superior fertility of their soil. Both are true; and the scale of benefits is thus beautifully balanced. The coarse grains of the east do not come in competition with the wheat of the west, and the profits of each are probably equalized. The Maker of the Universe, with a wisdom that we but faintly comprehend, deals out his bounties to his creatures with an equal and liberal hand. He gave us understanding, and made the earth for the use of man; but while He requires him to earn his bread in the sweat of his brow, man is so happily constituted that the labor of his hands can be most essentially aided by the exercise of his reasoning powers.

These have taught us to dig canals, make railways, excavate mountains for their treasures, cover the hills with grain and with herds, fill the valleys with herbage, and use the ocean to carry our several products to supply the wants of the most distant countries. The time has been when none but serfs and slaves labored; that time, for man's prosperity, has happily in a measure gone by.

In many portions of Europe, to labor is dishonorable. In this country, to labor is honorable, for here an idle man is a nuisance. An author asks, "What honest vocation can be named that does not contribute, in a greater or less degree, to the enjoyment of man? It may be humble indeed, but it goes to swell the mighty aggregate. It may be the rill that trickles down the mountain side, but it diffuses fertility to the valley, and mingles its drops at last with the ocean. The American motto is industry. Labor is honorable—idleness is dishonorable; and I care not whether it is the labor of the head or of the hands, for they mutually aid each other. Let me, however, exhort those who are devoted to intellectual pursuits, to cherish on their part an exalted and just conception of the dignity and value of manual labor, and to make that opinion known in their works, and seen in their actions.

"The laboring men of this country are vast in number and respectable in character. We owe to them, under Providence, the most gladsome spectacle the sun beholds in its course, a land of cultivated and fertile fields, an ocean white with canvass. We owe to them the annual spectacle of golden harvests, which carry plenty and happiness alike to the palace and the cottage. We owe to them the fortresses that guard our coasts, the ships that have borne our flag to every clime, and carried the thunders of our cannon triumphant over the waters of the deep."

Enterprise is another great trait in the American character. United with industry, it stops not at difficulties—it delights to overcome them. If occasionally its efforts are misdirected, in the main it is a healthy exercise of a wise forecast, aided by good sense, to advance individual and common interests. That enterprise has opened our forests, built our cities, manned our ships, projected our canals and railways; and whether we circumnavigate the earth, or people the Oregon, the cry of "go ahead" is still the watchword to urge us forward. In passing from this place to Buffalo on your railway, a few months since, I was forcibly struck with a practical and beautiful illustration of this trait in our character.

In Europe, it takes centuries to build cities, and they suffer all the evils arising from their slow method of transit for the interchange of products, before they dare venture upon a more rapid communication. But in this country, the foundation for cities is hardly laid before railways are made in every direction to secure to it population, business and wealth. Between Rochester and Buffalo, the red man of the forest has yet hardly left his hunting ground, and the deer been frightened from her covert; yet the forest is already threaded, and a pathway made, on which you pass with the rapidity of the eagle's flight, and by a power that seems irresistible. As you dash through the dark woods, your sensations are in unison with the scene around you, and an indescribable wildness is the predominating feeling.

These forests cover yet a large portion of our state. The country is too new and the population too sparse—although it may number at this time near two and a half millions—to bring a large portion of our state under cultivation.

The state of New-York is about the size of England. They have about ninety-eight millions of acres under cultivation—we, say ten. They produce annually two hundred and sixty-two millions of bushels of grain—we, about fifty-one millions. They have ten millions of cattle, and forty-four millions of sheep—we, two millions of cattle, and five and a half millions of sheep. The comparison of many other farm products holds about the same proportion.

In the cultivation of the soil, however, acre for acre, we are much nearer to them in the quantity of the general products; and when an equal area of surface is cleared, and we have about quadrupled our population, I trust we shall not be behind them in obtaining equivalent returns. Forty years ago, farming in the river counties was of the worst possible description. The virgin fertility of the soil had been exhausted by repeated croppings, and when we heard of the immense quantity of wheat raised in what was then called Genesee, it was thought, when compared with our section, that it was a very paradise for farmers.

Many of course were tempted to emigrate; and why not? The fertility of their farms was exhausted, and they did not know how to restore it. Their course of cropping was nearly as follows: take off the timber, put in wheat; then a crop of corn; after that, sow it with rye as long as it would grow. This was the course on the sandy ground; on the clay, a stronger soil, they put in wheat as long as it would grow; after that, let it run to pasture. To sow grass seed was not thought of. Cultivation like this brought at length poor returns to the farmer.

A renovating system for the soil must be adopted, from which better returns could be obtained, or they must all emigrate. The use of clover and plaster was the first renovating power that was tried, and they repaid tenfold the expense of their application.

But that was far from being enough; other appliances must be added, and they at length found that the dung heap, if they could only make enough of it, would effectually fill up the hiatus. Now, it is not alone the litter of our barn yards that is used for that purpose, but every species of offal and refuse, from the mud of the ditch to the muck of the swamp—from ashes, marl and lime—all! all! and all else that can be obtained, down to old rags, are found to have the most invigorating influence on the soil. Chemistry, too, is now coming to our aid, and she promises to be a most powerful ally. But we yet want to learn, as nearly as possible, how cause produces effect; we need a more intimate knowledge of our soil and its capacities, and what kind of substances and methods of husbandry will give the largest returns.

Our art is yet in its infancy, and our implements, until lately, have been of a piece with our husbandry.

These, too, have essentially improved, but it is only since the whole system has been examined, and found, throughout, deficient. A better day, however, is dawning. Many of these poor lands have been in a measure reclaimed, and the prospect for the future is brightening.

Agriculture, for fifteen or twenty years, has occupied a prominent place in our pursuits, and it has already made such full returns for the little attention bestowed upon it, that its advancement has become not only a matter of interest, but the study of it a source of pleasure.

Our men of talents have lately turned their attention to the subject. Our men of property have devoted a part of their wealth to its improvement; our farmers have brought their intelligent minds, as well as willing hands, to aid in the general advancement. And last, though not least, the statesmen who have this day met with us, we know to be its most devoted friends.

The state, too, has contributed her aid, by the general diffusion of knowledge, in the establishment of her schools, and in pursuing a much more intelligent as well as expansive system of education. She has aided by her geological survey; by her beneficence in contributing to the formation of country agricultural societies, and the patronage she has bestowed in the formation of this, the Agricultural Society of the State of New-York.

Our agricultural journals, too, of which there are many and excellent ones, have immensely multiplied; they have awakened public attention, for, from their large subscription lists, we must infer that they have many willing readers. These are the dawnings—they indicate that our progress in happiness is onward; that we are the friends of civilization, of education, of all that is to make us a great and prosperous people.

To you, American farmers, who comprise so large a portion of our population, a high destiny is committed. It is not enough that our fathers formed a government which secures equal rights to the humblest, and is the rainbow of hope to the oppressed of all nations. It is for you to carry on the work, not alone of political, but intellectual and moral improvement. A vast field opens before you, and I rejoice that here, where intellect is so bright, and humanity has so many friends, these great ends are in progress to their accomplishment.

We have met, fellow citizens, at this place, to commemorate the Fair of this Society for the year 1843. Our object was to exhibit to your view, and I trust to your benefit, the finest animals we could collect, the best farm implements that inducements in the way of rewards would bring together; and not confining our attention to animals and implements, we have offered premiums for almost every variety of articles that either your wants, your tastes or your desire for luxury would call for.

If, from this display, you return to your respective homes benefitted by our exertions and anxious hereafter to contribute your part to the general improvement, our labor will have been well bestowed; for this great state will be advanced in its onward march by the streams of wealth you will pour into her bosom.

NOTICES OF NEW PUBLICATIONS.

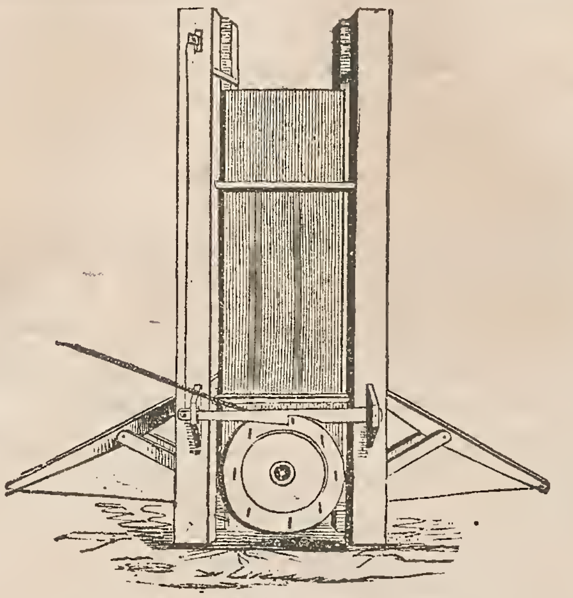
Prof. Silliman's Journal.—The October No. of Prof. Silliman's Journal is before us, containing many valuable papers of interest to the general reader. Among these, are the notice of Dr. DeKay's Report on the Fishes of New-York; remarks on Tides and Currents of the Air, by Mr. Redfield; the Fossil Trees of Nova Scotia; on Vibrating Dams; and the paper on the Fossil foot prints of Birds, and the impressions of Rain drops in the Sandstone of the Connecticut. Every person who has a taste for the sciences, should be a subscriber to this Journal.

North American Review.—We have received from the publishers, the October no. of the North American Review. Its articles are written with great ability, and two of them are on subjects of great interest. We allude to those on the Commercial History and Policy of this Country, and the Independence of the Judiciary. The Despatches of Cortes, the conqueror of Mexico, will be read with interest. This long established journal well sustains its high reputation, and in its series forms the best History of American Literature existing.

American Riblical Repository.—We invite the attention of those who are interested in such discussions, to a paper on "English Phonology," in the October no. of this capital Quarterly. It is not often that we meet so intelligent and searching a dissection of the structure of our language as is there to be found. Of the purely theological department of the Repository, we shall only say that it contains many papers profoundly and beautifully written. In matters of Biblical criticism, the Repository is without a rival in this country.

Eclectic and Museum.—Prof. Agnew deserves great credit for the skill with which he monthly serves up the very best papers in the whole range of Foreign Literature to the subscribers to the Eclectic and Museum. The admirers of that "half reasoning" animal, the dog, will find in the Oct. no. a paper after their own heart; containing more curious facts relative to this animal and his services, than we have ever elsewhere seen collected. The paper by Macauley, on the Life and Writings of Addison, like all his similar essays, possesses the highest merit. Of all our reprints, we prefer the Eclectic.

"Valuable Cows."—In our June no. "A Connecticut Boy" questioned a statement of the product of two cows, published in the Conn. Farmer's Gazette. The statement was as follows:—"Mr. S. Baldwin of Washington, Ct., made between March 4, and December 8, 1843, from two cows, besides supporting a family of two persons, 439 lbs. butter and 1,254 lbs. cheese." The Gazette publishes a certificate verifying this statement, which states that the facts can be substantiated by oath if necessary. The product it will be seen, is 846½ lbs. per cow—over one-third of which was butter. If any of our friends can equal this, we should like to chronicle the fact.



DEDRICK'S HAY PRESS.—(Fig. 92.)

Above we give a figure of a hay press, patented in June last, by Mr. L. Dedrick of Kinderhook, which he describes as follows:

"The power consists of two toggle joints placed opposite each other, drawn up by chains, from the lower end of each, winding on a windlass. From the wheel of the windlass a rope is drawn by a capstan, at which the horse works. A weight is added by a crooked lever, which assists in starting, so that the follower will move 12 inches farther than any other Toggel joint Press, and with greater ease.

"The joints are of such a nature that their power increases sufficient to meet the harder pressure of the hay, and thus making the draft of the horse at all times equal. The joints drawing against each other, there is but very little friction on the windlass. The horse makes 8, 10, or 12 turns, as may be desired, in pressing a bale. The follower lowers of its own accord, and is regulated by a lever in the reach of the person treading the hay, so that he can lower as fast as he desires.

"It occupies but a small space—10 feet square is sufficient in any barn, as the power works beneath the floor, and the horse will operate higher, or off in any direction from the press. Cost, from $100 to $120."

THE FARMER'S COAT OF ARMS.

One of the most attractive and prominent objects at the exhibition of the Rensselaer County Ag. Society, held at Lansingburgh on the 3d and 4th of October, was "*The Farmer's Coat of Arms,*" planned and executed by Alexander Walsh, Esq., well known for his long continued efforts in behalf of every measure calculated to advance the interests or elevate the standing of our farmers.

The structure was pyramidial in its form, 23 feet in length and 17 in height. Some idea of its massiveness will be obtained, when it is stated to have comprised no less than 38 agricultural implements, some of them large and ponderous, all valuable and useful to the farmer. Among them were a horse power and threshing machine, a fanning mill, horse rake, Yankee churn, hay knife, bush hook, bill hook, root cutter, corn sheller, cultivator, grain cradle, plow, straw cutter, &c. &c. Indeed, there was scarcely any instrument wielded by the hand of the farmer or used by him, from the common spade and hoe and axe to the most complicated and finished of agricultural machines, which found not a fitting place in the structure; while the natural roughness of the implements was softened down and rendered agreeable to the eye by a felicitous arrangement and combination of fruits and flowers. The whole was symmetrically adjusted, forming a pile every part of which was fraught with significancy, and whose *tout ensemble* fully harmonized with all the rules of taste. The pyramid was surmounted by a diminutive but highly finished plow, on which perched an American eagle, ready, as it seemed, from the auspicious and bouyant impulses of agriculture, to spread his wings for a loftier flight. In the centre were a barometer and chemical apparatus, such as retorts, crucibles, blow pipes, &c., near which were the following appropriate printed mottos: "Every change of wind, every fall of rain must affect some of the manifold operations of the farmer;" "There is no pursuit in which so many of the laws of nature must be consulted and understood as in the cultivation of the earth." On the right side was another—"Agricultural implements to save labor, facilitate industry, economize time, and increase production." On the left another—"Cultivate man—the improvement of the animal and vegetable kingdoms will surely follow." In the rear another—"At this period of the year, it is peculiarly proper for us to indulge in these Shows and Fairs—the horn of plenty ever flows with its abundance—the gardens and fields pour forth their abundant stores." Illustrative of these latter sentiments, around the base as well as upon the superstructure, were arranged a rich variety of fruits and vegetables—"overflowings of plenty's abundant horn"—made to overflow by the blessings of Divine Providence upon the husbandman's toil. Among the rare fruits, &c. that adorned the pile, were the following:—Five varieties of Siberian crab apple, plums, strawberries, the Pyrus Japonica apple, the seedless Barbary, sea kale, Chineupin chesnut, green globe artichoke, celery, carrots, second crop Windsor beans, cauliflower, new variety beet, Bassano tomatoes, &c. &c. Of *named* dahlias, it was ornamented by the following: Charles XII., Penelope, Zeno, Ansals Unick, Maid of Bath, Mania, Windal's Queen, Beauty of England, Reliance, Countess of Mansfield, Bowling Green Rival, Rienzi, Beauty of Bedford, Mrs. Rushton, Contender, Russell's Unique, Lord Morpeth, Wellors Mary, Lady Mallet, &c.

While the philosophical and chemical apparatus pointed to the connection between the natural sciences and the pursuits of agriculture, and reminded the beholder of the claims of those sciences to the increased attention of the farmer, the value of facts and practical principles found in the agricultural publications of the day was also set before the eye on the right side of the structure, where The Cultivator, the Reports of the N. Y. State Agricultural Society, and such books as the Farmer's Companion, Dana's Muck Manual, the Orchardist, and the Complete Farmer occupied a conspicuous place. Above these, and on the right side, were cocoons, mulberry leaves and reeled silk of 1827—the inventor of the structure thus referring to his early attention to the silk culture, that now begins to engage the farmer's attention. In view of the retirement and repose of rural scenes, and the well known fact that certain animals which, being out of their sphere in cities and villages, there seem timid or untamed, but are quite domesticated in the vicinity of the farmer, he also placed a rabbit in the bottom of the horse power, as if to represent the tranquil scenes and enjoyments of the farmer's life. Grapes were not forgotten; grouped bunches and wreaths of these spread their decorations over a large part of the structure. By way of protection to the whole, a suitable awning was erected, extending over it and ornamented with graceful festoons. This display of ingenuity and taste, so strikingly emblematical of the occupations of the farmer and of sciences identified with his appropriate elevation in society, and with the richest fruits of his labor, could have been inscribed to none more fitly than the individual selected. A descendant of one whose name is associated with whatever belongs to sterling excellence of character, and in whom agriculture and its kindred sciences found a most munificent patron—himself also the enlightened and honored president of the Society whose annual Fair this Farmer's Coat of Arms was intended to grace, it was gratifying to read, in a miniature engraving of the fabric, appended near the centre, the following dedication:

"To William P. Van Rensselaer, Esq., the Enlightened Agriculturist, the efficient and honored friend and patron of Natural Science, Temperance, Religion, and whatever belongs to the welfare of our Agricultural Population, this Farmer's Coat of Arms, composed of machines and implements for increasing the fertility of the soil and the productiveness of human labor, is most respectfully dedicated, by his obedient servant,
Alexander Walsh."

It was the intention of Mr. Walsh to have exhibited this "coat of arms" at the State Fair, as we learn by the following letter to the President:

Lansingburgh, Sept. 18, 1843.

Dear Sir—In consequence of many urgent calls for my presence here, I have been compelled to absent myself from the Annual Fair of the State Agricultural Society. You may rest assured, however, that the progressive annual growth of the hitherto unowned child of my brain—the State Agricultural Society—now almost in its twelfth year, and brought into existence by an anonymous advertisement inserted by me in the Albany Argus of 1832, has afforded me the utmost gratification; and my word for it, no parental exertion shall be wanting on my part to aid in bringing it to full maturity.

While going around with you at Rochester, in July last, to select the ground for the Fair, I planned several schemes to indicate in as appropriate and tasteful a manner as I could, the end and object of the meeting. I promised myself much gratification in lending my aid in carrying out these plans; but as I am debarred that pleasure, I contemplate using one of them at Rensselaer Co. Agricultural Fair, namely, *The Farmer's Coat of Arms*, a pyramid composed of the implements used in agriculture, &c. Yours, respectfully,

Alexander Walsh.

GREEN MANURES.

Messrs. Editors—I have sometimes thought, (though I have never tried it,) that ground might be cheaply manured, by sowing with oats, barley, wheat, &c. 10 or 12 lbs. of clover seed to the acre, and plowing it under the next spring as a preparative for grain or corn crops. It seems to me that it would help, at any rate, and be cheaper than stable manures. Could you give us any information on the subject? H. T. C.

Burlington, Vt.

The course proposed by our correspondent, is a common one with many farmers in the wheat districts of New-York, with the exception in most cases, that the clover is not plowed until the second season. It is thought better to let it stand longer than one season, on account of the great gain of the roots, and the vigor of the plant. There can be no doubt that on soils suitable to clover, this method of manuring is much cheaper than any other. We know an extensive farmer, and a most successful one, who avers that he can manure his farm cheaper with clover, than he could with manure, could he have it for only the carting from his yard and spreading.

THRESHING MACHINE—POND MUD—CORN SHELLERS—WEEVIL IN WHEAT.

A correspondent at Montpelier Springs, (Ga.) makes some inquiries in regard to the topics we have named. And first, threshing machines with separators attached. Pitt's separator is the best we have seen used, and think it might be adapted to any good machine. There are many good machines, but perhaps as many poor ones. A good machine will not break the kernel, or leave white caps, of which the writer complains. For kinds, and prices, we must refer to the advertisements in the Cultivator. One remark, however, we must make. *All* the machines which we have seen, or used on our farm, are too liable to break and get out of order. The castings are too light for the power used. This, where the means of repair are at hand, though vexatious, is not so serious an evil, as when a machine fails at the distance of perhaps hundreds of miles from the means of remedying a failure. As to the amount of wheat a machine will thresh in a day, nearly all is depending on the condition of the grain itself, whether cut with a sickle or cradle, well cured or otherwise. Two hundred bushels may be considered a fair day's work for a four horse machine.

Pond mud may be drawn and spread upon land whenever most convenient; but the better way is to draw and spread in the fall. Where considerable stock is kept, and stable manures abundant, mixing the pond mud with that, in heaps, or covering the cattle yards with the mud, makes the best of compost, and adds materially to the value of the whole.

There are several good corn shellers, of which Whitford's is perhaps as good as any. These machines, in general, are liable to the same objection made to threshing machines; they are not substantial enough, and the same may be said of chaff cutters. Farmers require things strong, rather than handsome; where strength and beauty are united in an implement, all that can be reasonably asked in those respects, is gained.

As to that injurious insect, the weevil, a number of experiments have been made by order of the French government in relation to the preservation of wheat from this insect. Reservoirs, made in limestone rock, or dug and lined with strong mortar well dried, and then filled with wheat, were found to preserve the wheat sound for years, when hermetically closed. If containing the insect when enclosed, they ceased to multiply, and soon became dead or torpid. Dr. Harris says—"These insects are effectually destroyed by kiln drying the wheat; and grain, that is kept cool, well ventilated, and is frequently moved, is said to be exempt from attack."

MR. COLMAN'S CIRCULAR.

In the Sept. no. of the London Farmer's Magazine, we find a circular addressed to the farmers of Great Britain, intended to call out statements relating to animals, culture, plants, climate, &c. &c. The queries are happily constructed, and we doubt not will be responded to frankly and fully, in a great number of instances. If so, a mass of information of the most valuable kind will be collected, of which we may expect the substance in the reports he is to make of his tour, and which can scarcely fail to be of great interest. We give a paragraph of the remarks of the editor of the Magazine, in introducing the circular to his readers, as exhibiting the singular want of information prevailing among well informed men in that country respecting this:

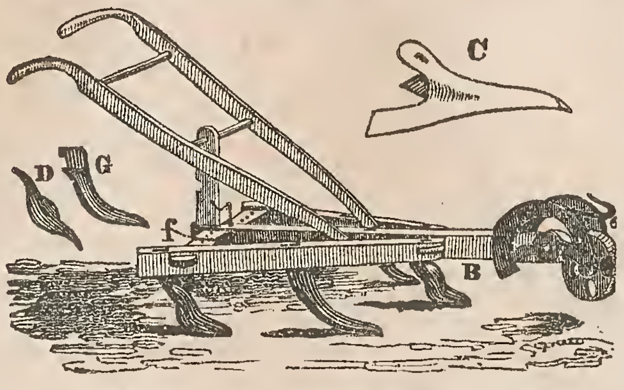
"We are, unfortunately, (and it is a disgrace to us as a nation,) lamentably deficient in statistical information on agriculture. The United States, every year, when the census is taken, institutes the most searching inquiry into the number of live stock, relative produce of the soil, extent of land under cultivation in different crops, &c. Beside these media, agricultural commissioners are appointed for each of the states, to report specially to the government upon the condition and progress of agriculture, and of these commissioners, Mr. Colman was one of the most indefatigable." The reader will see it would scarcely have been possible to have crowded more errors into a single paragraph. There has been as yet but one agricultural census taken; the census is taken only once in ten years, instead of every year; the government does not appoint state agricultural commissioners; not more than three or four out of the twenty-six states have appointed such commissioners; and the result of the agricultural census shows the inquiry was any thing but searching. Of Mr. Colman's labors in Massachusetts, too much can scarcely be said in their praise, and we trust those of Prof. Emmons in this state will be equally successful.

BLACKBERRY BRIERS.

Messrs. Editors—I have about two acres of land overrun with blackberry briers, and cannot get rid of them. I would esteem it a great favor, if you would inform me through your Cultivator how I can get rid of them, without referring me to a late number of the Cultivator, as I have no spare funds left.

Long Island, Aug. 3, 1843. A Subscriber.

If "A Subscriber" will turn a flock of sheep upon his blackberry acres, we think he will find them speedily to disappear. If very large and thick, they may be mowed or cut down, and the sheep will take care they do not rise again. Sheep farms are rarely troubled with the blackberry or raspberry. If cut so as not to fruit, the bushes in a few years will perish of themselves, or they may be dug out and the land cultivated.



BEMENT'S CULTIVATOR.—(Fig. 93.)

A correspondent at Pickensville, Ala., requests us to give an engraving of the implement called a cultivator at the north, as many of the subscribers to the Cultivator in that section of the country have never seen one, and opinions are very discordant as to its nature and use. We comply with this request willingly, by giving a cut of one called Bement's Cultivator or Horse Hoe, which, with perhaps some modifications, is found to possess valuable qualities, and is in extensive use. There are many others in use, but the general principle of all is the same; an implement drawn by a horse, constructed so as to spread according to the width of the rows, and by stirring the earth to the depth desired, between the rows of any cultivated crop, such as corn, roots, cotton, &c., exterminate all weeds, keep the earth loose and friable, and save a great amount of labor. The shares may be made of cast or wrought iron, and adapted in form to several kinds of culture. We have known it used successfully for plowing in wheat, as well as in the cultivation of root and corn crops, and it is one of those implement, which when once used, the farmer is rarely willing to do without.

AGRICULTURAL FAIRS FOR 1843.

Few things are more cheering to the real friends of agriculture than the reports which are thronging in upon us from the different parts of our wide country, telling of the success which has attended the numerous Cattle Shows and Fairs that have been held the present season. The spirit they exhibit, the enthusiasm in the great cause of agriculture and domestic industry they prove, must be considered among the most favorable indications that the cause is progressive, and the course of the friends of improvement still onward. The county societies of the state generally, and particularly the State Agricultural Society, have made evident advances in the public favor, and consequently in their wide spread usefulness. With scarce an exception, the meetings of the present year have been better attended, the competition more spirited, the animals and products exhibited of a superior class, and, what should not be overlooked in the matter, the ranks of the grumblers and fault finders have materially decreased. The good results have been too evident to be disputed, and public opinion is fast coming to the conclusion that such exhibitions are essential to agricultural improvement, and deserve the aid and support of every good citizen. In some few instances, unfavorable weather may have occasioned a falling off in the attendance, but could not damp the feelings of those present, or lessen the interest taken in the exhibition. Good animals, it is shown, exert a double benefit; they afford a better profit to their owner, and they create a spirit of emulation in others. Nothing is so convincing to a farmer as actual comparison; with him, seeing is believing, and these agricultural exhibitions are precisely the places where cattle, implements and products are submitted to these processes.

We should be pleased to allot a large space in the present no. of the Cultivator to the details of these meetings that have reached us, but space forbids. The many interesting incidents, the addresses, the interchange of friendly feelings, would furnish matter for interest as well as for speculation. They would show that the right spirit is at work, and that the American farmer has only to follow up the career of improvement on which he has just entered, to insure personal competence and a deservedly high standing in the community.

Not only has New-York shown the importance of agricultural Fairs and Shows, but from all the states evidence is reaching us that the farmer is awaking, and that the example set for years by some of the more favored sections of our country, has not been lost. The Cattle Shows of New-England, in their excellent management, their liberal support, and the confidence with which they are received, scarcely leave any thing in those respects to be desired, and their influence is what might well be expected. Every where agriculture is going ahead; sounder views of its importance, and the best measures for its support, are clearly gaining ground; public men are beginning to trace its vast influence in all the departments of political economy; and it is yearly becoming more evident that all other subjects are of minor consequence in questions of general interest, compared with agriculture. The PRODUCER is fast rising to his proper place, and labor is no longer dishonorable, except with those who are lacking in common sense.

The addresses of the present year have, so far as they have fallen under our notice, been characterized with great ability and practical directness. Some of our most eminent men have cheerfully responded to the calls made upon them to officiate as speakers at these exhibitions, and have brought to the occasion the zeal, intelligence, science and practical skill for which many of them are distinguished. In others, the practical farmer has left the plow to become the speaker, and showed that he was not one whit behind the best, in the interest he was able to impart, or the zeal he brought to the support of his favorite theme.

Many of the errors of the past in conducting these Fairs have been corrected; experience will do away the remainder; and for the agricultural societies of this country, we may well anticipate a long career of prosperity and usefulness.

GREAT YIELD OF WHEAT.

The following note from Mr. Dickinson of Onondaga Hollow, will show the course adopted by him in producing his crop of 52¼ bushels of wheat per acre, the present season. There can be little doubt that much more labor is expended in producing the wheat crop generally, than would be necessary if the grounds were properly prepared once for all, made clean, and kept clean, so as not to require fallowing as a cleaning process. We have as yet heard of no yield this year that has exceeded this.

W. Gaylord, Esq.—I send you a hasty account of the preparatory treatment, nature of the soil, &c., in the case of the wheat crop to which allusion has been made. Two years since, this month, I purchased the farm on which I reside, and commenced working it the next spring. There had been no clover seed used on the place by the occupant before me, except on the lot where the wheat was grown by me. That field had a crop of oats taken off, and was then seeded to clover. In the spring when I came on the farm, the clover was small and thin, and I sowed on it, 1½ bushels of plaster per acre. The second week in July, I mowed off the clover for hay. The last of August, I plowed in a large growth of clover, and harrowed it thoroughly. On the 6th and 7th of September, I sowed on one bushel and three pecks of Canada flint wheat to the acre, and harrowed it in. The soil is a friable black slate or loam. The wheat in the whole field was remarkably equal, and the crop per acre as stated. Yours truly, O. Dickinson.

Onondaga, Sept. 11, 1843.

CONVENTION OF BREEDERS.

The Convention of Breeders heretofore called, met at New-York on the evening of the 17th ult., and was organised by the appointment of Dr. J. A. Poole of New-Jersey, chairman, and Mr. Parsons of New-York, secretary. After the reading of the circular calling the Convention, an interesting discussion took place, in which Messrs. Watson, Allen, Bement, and others participated, on the various subjects alluded to in the circular. After the appointment of committees to report on the points of excellence in the several breeds of Durhams, Herefords, Ayrshires, Devons, and native stock, the convention adjourned to meet the following evening at the same place.

On Wednesday evening, a report on the Ayrshires was read by Geo. Randall, Esq. of New Bedford, and one on the Herefords by Geo. J. Pumpelly, Esq. Owego. The committees on Devons and native stock made no report, and that on Short Horns, consisting of Messrs. Prentice, Bement and Allen, stated that from the little time they had been able to devote to the subject, they had found themselves unable to prepare such a report as they would be willing to submit to the convention, and asked farther time to make their report. Though the reports made were not taken up, discussed and disposed of, they elicited a good deal of remark on the general subject of breeding, from most of the members of the convention, among whom were Messrs. Prentice, Sherwood, Vail, Bement, and Pumpelly, of this state; Messrs. Watson, Whitney, and Townsend, of Conn.; Mr. Randall of Mass., and others whose names we do not recollect. A resolution was passed, requesting the committee on Short Horns, to which was added Dr. Poole and Mr. Watson, to report to the annual meeting of the N. Y. State Ag. Society, to be held in this city on the 3d Tuesday of Jan. next, after which the convention adjourned.

NUT GRASS.

Mr. H. F. Bond of Kingston, N. C. inquires whether "any of our correspondents can inform him how to destroy nut grass." As it is unknown to us by that name, will some of our correspondents acquainted with it, and the methods of destroying it, respond to the inquiry?

Curious Fact.—Does not the following, which we find in the Columbia (S. C.) Advocate, strongly support the doctrine of Liebig, that in the absence of other means of nutrition, the nutritive organs act upon, and appropriate the stores already existing in the body; in other words, would the pig have lived so long had he been lean at the time of disappearance?—"Some two months ago, Mr. James Lyles of this place, missed a favorite pig, which, as it was very fat, he supposed had been used by some lover of fat pigs, and gave it up for lost, until last Tuesday, when he commenced the repair of his house, and on raising the floor, which was decaying from dry rot, he found his pig still breathing, after at least 58 days of entire abstinence from food or drink. The pig is still living, and able to take a little meal and water. A number of the most respectable persons can attest the above fact."

Prize Essay.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD,
Associate Editor of the Cultivator.

(Concluded from page 159.)

LIME.—There is no substance, containing no animal or vegetable matter, which exercises a more powerful or beneficial effect than lime, in some one or all of its forms of carbonate, phosphate and sulphate. In the common form in which it is found, that of a carbonate, it acts in two ways, mechanically and chemically. Being less porous than sand, and more so than clay, its mixture improves soils in which either of these prevail; while as an alkaline earth, it acts chemically on such animal or vegetable matters as may exist in the soil. Lime develops its chemical action most fully when in its caustic state, or when, by burning, the carbonic acid has been expelled, and the lime rendered what is termed quicklime. In this state, it dissolves such organic matter as may exist in soils, and prepares it for the food of plants. Humus frequently exists in the soil in a solid and insoluble state; lime applied to this, renders it soluble in water, in which form it may be taken up by the roots of plants. A vast deal of needless controversy has been carried on respecting the value of lime as a manure, or the quantity which should be used per acre. By some, it has been extolled as the very highest on the list effective manures; while others have decried it as of no use whatever; and both have appealed to experiments as establishing their positions. A knowledge of the nature of the action of lime, would have prevented such seeming contradictions. "Lime in excess, forms, from the humus of the soil, an insoluble salt; and may thus, when applied to a soil abounding in salts of lime, or in which it already exists, be productive of injury, whatever may be the vegetable or organic matter of the soil. In this state of excess, lime converts, but at the same time locks up, the humus of the soil; when if applied in the right quantity, it would have been useful. Lime is of no value whatever as a converter, or produces no chemical effect in promoting growth, unless there is organic matter in the soil on which it can act. Lime is most efficient when used on soils full of insoluble humus, such as peaty matter or woody fibre, but which, from the abundance of the tannin principle contained, resist the ordinary processes of decomposition." There would seem to be no difficulty, therefore, in determining whether lime can be used on any given soil to profit. Indeed there are, it is believed, none where it would not be useful, except such as are already supplied with this carbonate, or those which are wholly destitute of vegetable or organic matter. As a general rule, the greater the quantity of humus in a soil, the greater the amount of lime which may be applied with benefit. As long as there is a store of organic matter in the soil, lime, if not in excess, is a valuable manure; but when this is exhausted, the application of lime only increases the sterility by destroying such efforts at vegetation as might in time, aided by light and moisture, partially remove the unproductiveness existing. This fact may serve to explain some of the conflicting statements that have appeared in the agricultural journals of our country, on the use of lime. Where humus is abundant, the quantity that may be safely used, is very great; on soils already poor, a small portion speedily exhausted the remaining powers of the soil. Lime, from its alkaline qualities, acts in neutralizing whatever free acids exist in soils, whether oxalic, phosphoric, malic, or others. It acts also in decomposing some of the earthy or compound salts formed in the soil, and thus renders the geine held by them, available to the plant; but its great and most important use is in converting the insoluble organic matters existing, into soluble ones, and thus directly furnishing an abundant source of nutriment. Carbonate of lime is sometimes used pounded or broken fine; and in this state, its mechanical value is great in stiff or clay soils. Such soils too, usually abound in acids; and these gradually acting on the lime gravel, its chemical effect is slowly but beneficially apparent.

MARL.

Marls, which exert so powerful an influence on many soils, derive most of their value from the lime they contain; and with few exceptions, their power as fertilizers may be measured by the per cent of lime shown on analysis. There are some marls, however, which are an exception to this rule; their value appearing to depend on other matters than mere lime. Of this kind is the celebrated green sand marl of New-Jersey, and some other points of the Atlantic coast. In this formation, which acts so powerfully as manure, there is from 6 to 10 per cent of potash; an agent, which, on light soils, is scarcely equaled as a manure. In addition to the lime which marl contains, the influence of the proportions of sand and clay, of which the balance usually consists, must be taken into consideration in determining the value of this substance for particular soils. Thus, on heavy or clay lands, marls abounding in sand will be found preferable to those the base of which is clay; and on light or sandy soils, the latter will be much the most useful, the per cent of lime in both cases being alike. Marl should be spread over the surface, and pulverized by the action of air and frost before it is plowed under. When so treated, experience proves it is a most valuable manure, and a single dressing exerts an influence for many years.

PHOSPHATE OF LIME.

Of another salt of lime, the phosphate, notice has been taken when treating of bones as a manure. It will not be amiss, however, to state here, that when any substance is invariably found in any part of a plant or plants, it is right to infer that the perfection of that part of the plant is impossible, unless the substance required is within reach of the plant while growing. Thus the stems of the grasses abound in silex; some of them, the cane for instance, to such a degree as to strike fire with steel, and unless this substance, in the form of silicates, was presented to the plants, they would not be perfect. So it is right to infer that unless soils contain the phosphates, or a supply is furnished for the use of plants, that the cereal grains could never be perfected, as the seeds of these invariably contain large quantities of the phosphates. Phosphates are found more or less in all soils, and when these are deficient, bones form an abundant and accessible source for their supply. It is also found in considerable quantities in all animal and farm yard manures, particularly in the liquid part.

GYPSUM OR PLASTER.

Gypsum is the third principal salt of lime which exerts a powerful influence on plants, and is one of the most valuable of all our mineral fertilizers. Much variety of opinion has been entertained respecting the manner in which it exerts its influence or produces its effects on plants; and these opinions can scarcely be said to be harmonized, even at the present time. Davy was inclined to consider it a direct food for the plant, as it is found, to some extent, in those plants on which it exerts the most power. Chaptal referred its power to its stimulating agency on plants, produced by its action when dissolved in water. Liebig ascribes its value to its giving a fixed condition to the nitrogen or ammonia which is brought into the soil, and which is indispensable for the nutrition of plants. Dana, to the action of the lime and acid of which the gypsum is composed on the organic matter and silicates of the soil. He says—"It seems almost incredible that so minute a portion of a mineral can act at all; yet how beautifully is the result explained by the principle that plants decompose first this salt; the lime, for plaster is a sulphate of lime, then acts on geine, which is thus rendered soluble; while the acid, the oil of vitriol or sulphuric acid, immediately acts on silicates." It seems very probable that no single one of these suppositions will be found able to account in full for the action of plaster. That of Dr. Dana appears to approach as nearly to a solution as any of them, if we extend his term silicates so as to embrace those combinations formed by the union of the acid of the gypsum with ammonia, after its separation from the lime. If the action of plaster was due to its fixing ammonia alone, then it ought to be equally efficient at all times and places, which it certainly is not; or if it acted directly as nutriment, then its action would be as constant as that of rotted manure or compost, which farmers well know is not the case. Plaster does not act as usefully in the vicinity of the sea, as in the interior; and on heavy wet soils, is scarcely felt at all. Light sandy soils, or loamy ones, are those on which plaster acts the most sensibly; and clover, lucerne, potatoes, cabbages, and the leguminous plants, such as peas, vetches, &c., are the vegetables on which it exerts the most powerful influence. It is much valued as a dressing for wheat, not so much, perhaps, for its direct action on that plant, although that is not trifling, as for its effect in securing and promoting the growth of the clover and other grass seeds, usually, in wheat countries, sown with this crop. So marked is the influence it exerts in this respect, that plaster, clover, and wheat, are always associated in the mind of the most successful wheat growers; and its use is the most extensive in the best wheat growing districts of our country. In the minds of many, a senseless prejudice has existed against plaster, on the ground that it the more speedily exhausts the soil, and that the heavy crops at first obtained were the price of ruined farms. It is doubtless true that the man who uses plaster on his farm, who takes from his soils all he can get, and returns nothing to them, will soon find his soils worthless enough. He who intends to farm it in this way, should avoid plaster; but let any farmer alternate wheat and clover; husband and apply his manures; feed off his clover in his fields, or to his stock in their stalls; let him not spare his grass seeds in seeding, or his plaster in dressing, and his farm will never run down. Such men need not fear plaster.

SALT.

Common salt is an active and valuable manure, and has been used successfully as such, in all parts of the world where it can readily be obtained. In England, the pickings or impure salt is used for this purpose; and many experiments are on record to show that the effect is most marked and decisive. The following is one of a series of experiments instituted by Mr. Sinclair, to test the value of salt as a manure. The soil was light and gravelly.

No. 1.	Soil without any manure for 4 years. Produce per acre, ...	13 bushels,	26 lbs.
2.	Soil manured with stable dung to the previous crop, (potatoes,)........	26 do.	52 do.
3.	Soil with 5 bush. of salt per acre, and no other manure for 4 years, ...	26 do.	12 do.

In the opinion of Mr. Sinclair, the effect of salt as a manure was to lessen the produce of straw as compared with other manures, and to increase the weight of the grain.

Prof. Johnston has done more than any other person to extend the use of salt as a manure, by giving to the world his excellent Essay on salt used on soils, and the mass of experiments he has recorded. It appears that salt in small proportions, promotes the decomposition of animal and vegetables substances; that it destroys vermin and kills weeds; that it is a direct constituent of some plants, and therefore necessary to their perfection; that all cultivated plants of marine origin contain it, asparagus for instance; and that all such succeed better when watered with salt water, than when deprived of it; that salt preserves vegetables from injury by sudden transitions in temperature, salted soils not freezing as readily as those to which salt has not been applied; and that it renders the earth more capable of absorbing the moisture of the atmosphere. When salt is applied as a manure, it may be used in quantities from six to fifteen bushels per acre; although some have gone as high as 50 bushels. Farmers, however, should be cautious how they venture on excessive doses, as an extravagant one could scarcely fail of being fatal to any crop. Legrand, in his experiments with salt, found that it gradually improved the crop of barley until sixteen bushels per acre was reached, when it gradually diminished until the amount of forty bushels per acre was reached, when vegetation was destroyed. Salt combined with manure, has proved very efficient; and in the Woburn experiment, the wheat so treated exceeded all others. The most favorable proportions were found to be 45 tons of dung, and five and a half bushels of salt per acre; the manure plowed in, the salt sown with the seed. The experiments that have been made, would seem to indicate that a preferable mode of using salt, in most cases, would be to sow it on the land some weeks before the seed is to be put in. In this case, where lime exists in the soil, a chemical change takes place, at least partially, and muriate of lime and soda is the result. Such a change would seem to be most favorable to vegetation.

SALT AND LIME.

Salt and lime, artificially mixured as a manure, promises to be a valuable aid to the farmer in those positions where the soil abounds with insoluble silicates or geine, and where other manures necessary to produce decomposition or fermentation are not at hand. Prof. Johnston recommends a mixture of two parts of lime and one part of salt, the mixture to remain incorporated in a shady place, or covered with sods two or three months before using. Salt and lime should not be used immediately after mixing, as bad results are apt to ensue; but after being well mixed in a dry state and lying as directed, it may be applied at the rate of from thirty to sixty bushels per acre, either before or at the time of sowing. Mixed with soot, salt acts with great power on roots. Mr. Sinclair mixed six and a half bushels of soot with the same quantity of salt, and used the mixture on lands sowed to carrots. The result was, that unmanured land gave twenty-three tons of roots per acre, and the manured yielded forty tons per acre; and Mr. Cartwright found that where unmanured soil gave 157 bushels of potatoes per acre, 30 bushels of soot and six of salt, made it produce 240 bushels per acre. Dr. Dana furnishes so beautiful an explanation of the manner in which this manure acts, that it deserves a place entire: "By mixing quicklime with common salt, its soda is let loose, the acid combines with the lime, forming a soluble salt of lime, and so long as the soda remains caustic, it has no effect on the muriate of lime, but as soon as the soda becomes mild or carbonated, decomposition of the muriate of lime is produced, and the common salt regenerated. Commencing then with quicklime and salt, we pass to a soluble salt of lime and caustic soda, and from that to mild soda, and to carbonate of lime and the original salt. If these various changes take place in the midst of peat or geine, it is evident that the caustic soda acts upon the geine, and also evolves ammonia from that substance; secondly, that the muriate of lime, in its finely soluble state, insinuates itself among the particles of the geine; that the soda is also equally diffused, and that when the soda becomes carbonated, it produces an almost impalpable carbonate of lime throughout the whole mass, which, by its equal diffusion through the soil with the geine, acts upon the silicates, as has been heretofore explained." To produce these effects, Dr. D. directs to take one bushel of salt and two bushels of lime; to make the salt into strong brine, and with it slack the lime. Mix both well together, and let them remain ten days; then let them be well mixed with three cords of peat, shoveled well over for about six weeks, when it may be used. A quantity of salt sufficient to destroy all vegetation, may be applied to a soil with safety when a few months are to elapse before the crop is to be put on; as the chemical changes which take place, partially neutralize its effect during this time. A small quantity mixed with the soil in each hill of corn, has been found to protect it from the wire worm and the cut worm; indeed there is no substance that insects of all kinds more dread than salt. It is probable, therefore, that further experiments will show that not the least value of salt is to be found in its preventive properties against these depredators.

CHARCOAL.

Charcoal is a valuable manure, and applied directly to the soil in a pulverized state, produces excellent effects. It acts by rendering the soil more permeable to atmospheric air, by absorbing and retaining for the use of plants the ammonia of the atmosphere, or such as falls in showers; by rendering soils with which it is incorporated warmer; and by furnishing a constant supply of carbonic gas to growing plants. The great productiveness of what are called coal hearths, or those places on which charcoal has been burned, has long been a common remark, but this has been commonly attributed to the ashes, burned earth, &c. on such spots, rather than the coal. The use of coal alone, however, shows that though these other matters are not without their value, the great additional fertility of these places is mostly owing to the coal. Immense quantities of this substance are wasted in the vicinity of forges, furnaces, smith's shops, &c. which would be of great value, were farmers to collect such refuse or dust coal, and apply them to their farms. On heavy soils in Europe, it has long been customary to pare the surface, and burn the turf so collected, taking care to incorporate as much of the clay soil as will consist with the ignition of the turf. This burnt mass of clay and ashes is scattered over the ground, and is found to make a valuable dressing on such soils.

OTHER MANURES.

It is impossible to particularize all substances that may be used as manure. It is evident, from the definition first given, that they would embrace all animal matters without exception; all excrementitious secretions of animals, and all vegetable ingredients in one form or another, together with a few of the mineral salts, such as the alkalies, silicates, &c. Thus, oil-cake, bran, yeast, brewers' grains, putrid meat, in short any substance that can be classed under the above divisions of matter, may be useful as manures, and this fact should induce great caution in their preservation and application. Whatever may be the present condition of a particle of matter, if it has ever formed a part of an organic body, it can again become such under circumstances favorable to such a condition.

In the preceding rapid sketch of the principal substances valuable as manures, the best methods of preparation and use have also, to a considerable extent, been given. All then that would now seem necessary for the purpose of this Essay, is a condensed view of the principles laid down, with such incidental topics as have been passed over, but of which a notice appears necessary.

PREPARATION AND USE OF STABLE MANURES.

As the common farmer must always rely on stable or farmyard manure, as his principal means of fertilization and renovation of his soils, it is to these, to their preparation and use, that his attention must be principally directed. It is an important question for him to decide, whether he should apply his manure in a long state, that is, apply it fresh from his stables and yards before undergoing decomposition, or let it remain until the litter and straw has fermented and become rotten, before using it. Some remarks on this topic have been made in the preceding pages, when treating of such manures, but its importance will justify their extension in this place. It has been said that rotted manure contains more geine or humus, weight for weight, than unrotted or fresh manure. This is probable, but to make this test decisive, equal weights of dung should be taken while fresh, one analyzed at the time, and the other when fermented and rotted. This course, it is believed, would show a result in favor of the unrotted. There can be no doubt, however, that straw, stable litter, &c. should be partially fermented before using, and the moisture necessary for the process should, if possible, be the urine of the animals or the drainings of the yards. Straw, in dung intended for a particular crop, is of little use unless the fermentation has far progressed; and a distinguished German farmer has asserted that he considered straw as of no consequence in manure, except as acting the part of a sponge to retain the fluid parts of the animal manures. There are some exceptions to this remark, as when straw is applied to heavy clay grounds before rotting. In this case, when plowed under, it gives a degree of porosity to the soil, absorbs part of the moisture, and acts the part of a valuable amender, while it is eventually converted into a manure, or a source of carbonic gas. Where the unfermented dung of the yard or stable is applied to the soil, it should be covered at once by the plow, that the gases liberated in fermentation may not be lost, and that the moisture necessary for fermentation may be secured. When rotted or fermented, the covering is not of so much consequence, and it may, without loss, be scattered on the surface and mixed with it. If used without fermenting, it should be applied to hoed or summer crops, such as corn or roots, as these are in that state while the manure is at the height of its fermentation, when forcing manures are the most useful; but if applied to the smaller grains, they are most active when matter for the perfection of the seed, not the enlargement of the straw, is most needed, and the last is increased at the expense of the first. Taking all these circumstances into consideration, there can be little question that the most economical way of making and using manures, is to convert the stable and barnyard manure into compost, by the addition of peat, swamp muck, cleansing of ditches, wash of roads, leached ashes, or even common loam or earth, taking care, when the manure is wanted for heavy soils, that the earth used in the compost should be as light or sandy as may be; and where the soil is light, that the compost earth should be marly clay. Into such a compost heap, all weeds, straw, litter, animal matter of all kinds, night soil, &c. &c., may be thrown, and upon it all the wash of the yards and urine of the stables may be poured; and if the animal and vegetable matters as they accumulate, are kept covered and moist, the fermentation will go on successfully; the alkalies and salts of the animal matters will act on the vegetable part and saturate the earths used, and the whole will be converted into manure of the most valuable quality.

PREPARATION AND USE OF COMPOST.

The labor of preparing compost, it is true, is much greater than merely drawing it from the yard, but the quantity is so much increased, and the quality so much improved, that it is the most economical in the end. The only method that can compare with it, is to place these matters over the yard, and let them be composted or fermented in that place; but there will always be a great waste in this way; and where turf or vegetable mold is used for composting with the animal manure, the compost heaps can frequently be made where they are to be used, and the labor of drawing materials greatly lessened. Bommer's patent manure is only compost made in a scientific and accurate manner, every part of the process so managed as to produce a perfect fermentation, without the loss of any of the valuable parts of the constituents used. From a knowledge of the processes employed by him, we are able to say that where his directions are followed, a powerful and valuable manure cannot fail to be produced. The fundamental principle upon which composts have been made, is that of impregnating the earths used in the process with the soluble salts and the gases, which, in the ordinary methods of rotting, are wholly or partially lost to the farmer. The discussions which have been carried on, as to the propriety or impropriety of burying manures in the soil, have arisen from not stating the kind of manure to be used. The solid and soluble parts of manures have a tendency to sink into the soil; the gases evolved in fermentation a tendency to rise. The true principle, then, is to bury the unfermented matters no deeper than is necessary to secure the moisture required for fermentation, while the fermented or decomposed dung, having no fertilizing gases to lose, may be mixed at once with the surface earth. Some of the greatest crops of Indian corn ever grown in the United States, have been produced by placing a heavy dressing of unfermented manure on turf land, and turning it under with the plow. The surface is then rolled to press the sod close upon the manure, and afterwards harrowed, to loosen the earth for the reception of the seed. Into each hill, a small portion of fully rotted manure or compost is put at planting. This promotes germination, gives the young plant a vigorous start, and by the time the roots have penetrated beyond this, active fermentation has commenced in the long manure, and thus fertilizing matters are furnished in the greatest abundance when most wanted by the plant.

USE OF LIME.

Of the mineral manures used, lime, as has been already stated, is the most important, and under all its forms, is extensively used in Europe and in this country. The German farmers of Lancaster, Chester, and the adjoining counties of Pennsylvania, use lime more extensively than in any other part of this country. Considerable discussion has been had at different times as to the comparative value of limes that contain magnesia, or such as are free from it; but the value of lime as a dressing for soils, seems to be every where conceded in those districts where it has been used. It appears as the result of experience, that lime produces the best effect on what are called stiff loams, or loams inclining to clay, and in which a good proportion of decayed organic matter is found. It is found, too, that it operates more favorably on soils natural to oak and its kindred trees, such as walnut, poplar, &c. than on those where the beech, elm and maple constitute the principal timber. It is singular that the richest limestone lands, as they are called from being based on this rock, are frequently those on which heavy dressings of lime operate like a charm. If used as a top dressing, lime is usually applied to the sod in the fall; but the practice most approved, is to lime the corn ground in the spring, on the inverted sod. Manure is applied to the wheat crop after lime. The quantity of lime used varies much. There is no doubt it has sometimes been used in excessive quantities; and when used on soils nearly destitute of vegetable matter, can produce no good effect. On a medium soil, fifty bushels per acre may be considered an abundant dressing; but three or four times that quantity is sometimes used. The best method of using lime, is to take it from the kiln, unslacked, and deposit it in heaps in the field where it is to be used, not more than three or four bushels in a place; and either slack it by pouring water over it, or, which is better, by covering each pile with earth, and letting them slack by the moisture thus furnished. When sufficiently fine, the earth and the lime are mixed by shovelling over, and the mass is then scattered over the land to be dressed. The soil should be well harrowed after the application of lime, to incorporate it with the surface earth.

NECESSITY OF MANURING.

It is obvious that the manuring of a farm should only be limited by the ability of the owner. On a plentiful supply of manures, is depending the fertility of his soils, the amount of his crops, and consequently the extent to which his labor is rewarded. There is no expenditure on a farm, so safe as that for manure; and the labor required to increase it, is never labor lost; at least, if directed by an ordinary share of agricultural knowledge and skill. Every source of supply should be made available; nothing capable of fertilizing should be lost. The farmer who takes from his soil more than he returns to it, is surely impoverishing it; and if he escapes such a calamity himself, he leaves to his successors a worn out farm. If he returns as much as he receives, his farm will retain its original fertility only; but the true farmer will scarcely be content with this. To increase its fertility, and the amount and quality of the crop taken from the soil, should be the aim of the husbandman. This done, his labor is lessened, his profits are greater, his farm is worth more; nor must the pleasure arising from beautiful fields, golden harvests, fine animals, accumulating prosperity, be omitted in making up our estimate of the advantages of successful culture. Manure may be a homely subject, but on its preparation and use every thing is depending. Without it, the deep green of our pastures, the golden yellow of our corn fields, and the fine beef and white loaf of our tables could not exist. To the farmer, manure must be the first thing, and it must be the last thing; with it, he can do every thing; without it, nothing.

OHIO VINEYARDS.

THE vineyards of Ohio appear this year to be in the "full tide of successful experiment," and though considering the use of wine as a beverage unnecessary, still, as large quantities of it will be used, we are glad to notice the success of the American vinedresser, as supplying an important deficiency in our products hitherto, and one that annually costs us large sums of money to procure. Every step thus gained, we consider a triumph for home industry, and a nearer approach to real practical independence. The German emigrants from the banks of the Rhine have taken the lead in this matter, and their success would seem to be certain. Among the vineyards that are scattered up and down the Ohio, in the vicinity of Cincinnati, that of Mr. J. E. Mottier is one of the most prominent. From a description of a visit to it by the editor of the Cincinnati Gazette, we gather the following facts. The vineyard contains about 6 acres; the vines planted in rows 6 feet apart, and 3 feet apart in the rows. They are trained to posts firmly fixed in the ground, 7½ feet high, and intertwined from hill to hill. Locust posts are preferred by Mr. M. as the most durable. Mr. Mottier cultivates none but American varieties of the grape, and they are of course hardy, and need no protection in winter. He runs a plow or cultivator occasionally between the rows, to keep the soil in good order and the weeds down. He prefers a northern to a southern exposure, as his experience teaches that the grape in that vicinity oftener suffers from early, or spring, than from late frosts. Since 1829, he has lost but one crop from frost: on the Rhine, if three crops out of five are saved, the vinedresser is fortunate. One thousand five hundred gallons of wine were made last year; more vines have this year come into bearing, and the wine product is estimated at 4,000 gallons. The Catawba grape makes a white wine, resembling the Rhenish Hock, and in good repute. The Cape grape makes a red wine, more like Burgundy. The wine sells readily at $1 per gallon. Mr. Mottier is also largely engaged in the culture of other fruits. His strawberry beds are very productive, and he sold last spring 5,000 quarts. His peach and apple orchards were laden with the finest fruit. Mr. M. is a cultivator of the new school, or in other words, a book farmer, as his fine breeds of cattle, horses, swine, &c. fully prove. His Durham cows are superior milkers, and as he feeds them liberally on carrots through the winter, his butter dairy is very productive, and its proceeds command the highest prices. That the culture of the grape for wine, at the north, will ever become common, we do not imagine; but if our farmers generally would plant out a few vines of the best varieties adapted to their several locations, they would soon find themselves provided with a supply of one of the best of fruits, costing nothing in culture, and rarely requiring renewal.

ELDERS AND DOCK.

"How shall I kill a lot of sweet elders without plowing up the ground? I do not wish to plow, as they are on a rich intervale, sometimes overflowed, and the soil if plowed, would be liable to be washed away. (*a.*)

"How shall I kill dock, which is all over my flats, more or less, (not burdock.) It has a long leaf, grows from one to three feet high, the root runs deep, and the plant produces an immense quantity of seeds." (*b.*)

(*a.*) Sweet elder may be destroyed by repeatedly beating down and bruising the foliage and young shoots, as often as they appear during the season. Silk grass, or milkweed, may be exterminated in the same way, but the treatment to be successful, must be thorough. Perhaps as good a way as any, is to take a yoke of cattle and chain, and draw them out by the roots. This is certain; but there must be no roots left, to render it necessary to again repeat the operation. The best way is to meet all such pests at the outset. A single blow with a grubbing hoe, will the first year eradicate an evil, that in course of a few years will require weeks to exterminate.

(*b.*) Dock is a plant that may be destroyed either by pulling, or by cutting off below the crown of the plant. Small roots may be pulled, large ones must be cut off. Care must be taken to cut them fully below the crown, and their destruction is certain. It is very difficult to keep overflowed lands free from weeds, as the seeds are liable to be floated upon it, and left in the deposit of mud to vegetate. Annual examination and cleaning, will, however, do much towards giving these rich lands their full value and productiveness.

MACHINES FOR CLEANING CLOVER SEED.

A correspondent in Plainfield, Mass., wishes for some information on the subject of machines for cleaning clover seed, and refers to those mentioned on the 127th and 138th pages of the 7th vol. of the Cultivator, as Rittenhouse's, and Cummings', and asks to be informed as to the expense, &c. of them. We believe the patentee or maker of the first kind named, resides in Albion, Orleans co., in this state, and if he would furnish us a statement of the cost of his machine, where it can be procured, &c. he might benefit himself and confer a favor on others. We will endeavor to obtain from Mr. Cummings, a description of his machine, cost, &c. Will not some of our Seneca co. friends, who are famous for the quantity and goodness of their clover seed, favor us with an account of the machines used by them for cleaning clover seed, with their cost?

Original Papers from Contributors.

PLOWING GREEN SWARD FOR SPRING CROPS.

At what season of the year should green sward be turned over for a crop of corn or potatoes, with the greatest amount of economy in view to the cultivator.

MESSRS. EDITORS—That all grass lands intended for corn or potatoes, or any other crop, should be plowed in the spring, we have many scientific and practical men who will correspond to the fact. One man will advise me to plow my green sward almost the first thing in the spring, as soon as the frost is sufficiently out to admit the plow, and advances all his judicious and stable reasons for so doing. Another advises to delay plowing until a day or two before the planting, and delay planting as long as possible, that you may have a good crop of grass to turn in, which will serve as a crop of manure. In illustration of this principle, when I was traveling, the last summer, through the state of Massachusetts, in the month of August, I fell into conversation with a gentleman, who remarked that a friend of his recommended to him some potatoes of an extraordinary quality, and offered him some of them to plant; but he declined the offer, remarking that he had occupied all his ground, and used all his manure; and also, that being then very late in June, he doubted whether they would come to any thing, if planted. His friend replied that if he had a piece of *green sward* that he could spare, to do as he had done, viz: to turn the turf over as evenly as possible, and drop the potatoes in every other furrow while plowing, turning the sod directly upon the potatoe; the vegetable matter in the sod, by its decay, answering the purpose of a coat of manure. He performed the experiment as recommended, and was so well pleased with the present trial that he ordered his men to obtain twelve bushels more and plant them in the same way. This conversation was about the 17th of August, when he informed me that the vines had completely covered the ground, and that he never saw a more flourishing field of potatoes any where in his life. The soil is a dark, gravelly loam, somewhat inclined to clay.

Another scientific and practical agriculturist, equally wise in his own judgment, tells me by all means to turn over my green sward in midsummer, immediately after haying, for a crop of corn or potatoes on the following season, and in the spring cross plow and harrow, which will make your field as easy to cultivate as one which has been plowed two or three years.

Still another says, there is but one time only when grass lands should be turned over, and this should be the last thing done on the farm in the month of November. Plowing at this season has many advantages; the team is in a better condition *for* plowing at this season than any other; it is a time, too, when the farmer can plow the most ground at the least expense; and also that by plowing at this season, the action of the frost upon the soil tends to pulverize and make it mellow for cultivation.

That this subject, or, *when is the best time to plow grass lands, with the greatest amount of economy of time, labor and manure, or capital, to the cultivator*, is attended with many difficulties to be answered, I am fully aware. Almost every farmer has as many different kinds of soil to plow and cultivate as he has crops growing; and as one kind of soil will not produce good wheat, while another of a different quality will bring it to perfection, so I believe that the right time for plowing one kind of soil does not follow as a consequence *the* time for plowing all kinds of soil. Hence the following: 1. When is the best time to plow dry, gravelly soils for a crop of corn or potatoes, with the greatest profit to the cultivator, from the least expense of time, labor and manure? 2. When is the best time to plow moist, heavy, gravelly soils, with the greatest profit, from the least expense, &c.

The science of agriculture has, in my opinion, advanced to that state in which its different branches, like that of plowing, should be tested by actual scientific experiment.

I have advanced these opinions on this subject, Messrs. Editors, that I may, if possible, through the medium of your agricultural journal, induce some one, if not many of its useful and highly intelligent contributors to advance their opinions, practice and experience on this subject, that thereby I may enlighten my own mind, and that the result may be the means of usefulness to many of our intelligent and practical farmers. Yours, &c.

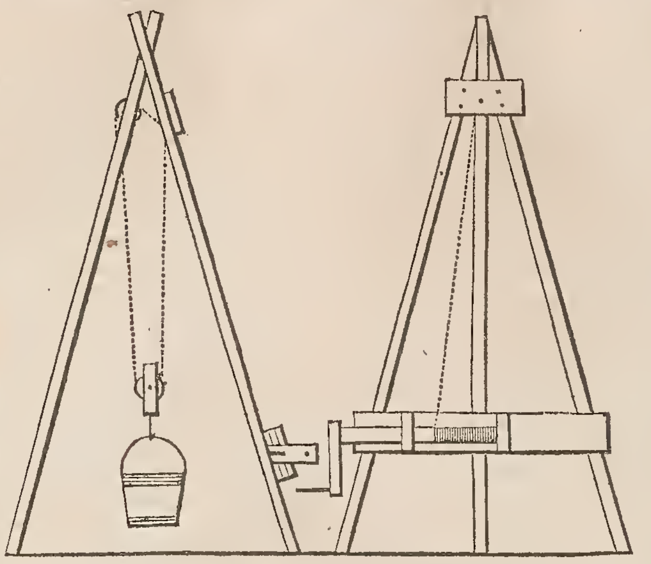
YANKEE FARMER.

New-York, Sept. 20, 1843.

WIND MILLS.

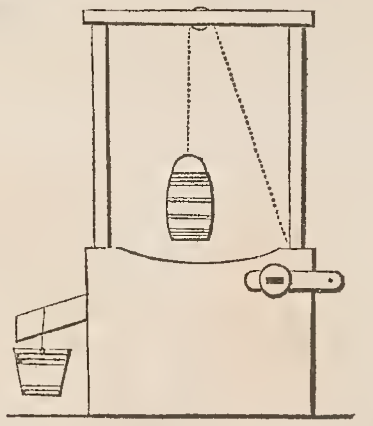
MESSRS. EDITORS—Will you or some of your correspondents who are acquainted with wind mills, furnish through the Cultivator such a description of the most simple and effective horizontal wheel, as would enable an ordinary mechanic to construct one. In all sections of the country, which are, like the prairie regions of the west, destitute of running water several months in the year, I think wind might be employed to great profit in raising water from wells for our cattle. To draw water daily for a large stock of cattle is no trifling task. And why might not a horizontal wheel, revolving over a barn, furnish power to impel the thresher, straw cutter, &c.? An answer to the above will doubtless be acceptable to many of your western readers as well as myself. P.

Bowling Green, Wood co., O., Sept. 1843



GIN, FOR RAISING EARTH FROM A WELL.—(Fig. 87.)

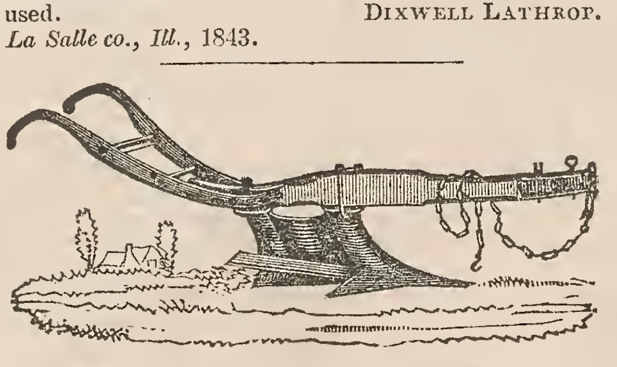
MESSRS. EDITORS—I send you a sketch of two simple machines, one of which is commonly called a gin, (fig. 87.) and is a convenient machine for raising the earth from, and lowering the stone into a well, and for a variety of other purposes. I have given two views of it, that all parts may be so distinctly seen that any man may construct one. It may be constructed of three round poles or joists ten or twelve feet long; two planks should be firmly pinned upon two of the joists, one about three feet from the bottom, upon which the windlass is secured by means of two short pieces of plank, crossing the first mentioned one at right angles, and secured to the same by pins. The upper plank is pinned upon the joists near the top, and secures the joists at such a distance from each other as to admit the third one between them; (one end of the rope is also secured to this plank;) a strong pin is put through the three joists at the top, upon which they turn and admit of being spread more or less at the bottom. There is one pulley fixed in one of the joists near the top, and one moveable as represented. They may be 4 or 6 inches in diameter, as most convenient; the size of the pulley has no effect upon the power of the machine. Fifty pounds of force applied to the crank, will be sufficient to raise four hundred lbs. weight, admitting there is no friction, and the crank is 16 inches and the shaft 4 inches.



Windlass for raising Water from a Well.—(Fig. 88.)

The other machine is a windlass for raising water from a well, for domestic use, and is so simple as to need no explanation; it is simply a crank and shaft with a rope passing over a pully. A small friction lever may be placed upon the top of the shaft and pressed down by the hand, to prevent the bucket from descending too rapidly. The shaft may be 4 inches, and the crank 10 inches. By means of the pully, the bucket is kept in the center of the well, and is not liable to be beat against the sides. The shaft is also placed upon one side of the well instead of over the center, as is the case when no pulley is used. DIXWELL LATHROP.

La Salle co., Ill., 1843.



PROUTY & MEAR'S NEW AND IMPROVED SUBSOIL PLOW.—(Fig. 89.)

THESE plows are light in their structure, simple in construction, easy in draft and management, adapted to a common team on common farms, viz: for two or four horses, or oxen, and efficient in operation. The weight does not exceed that of the common plow. Simplicity is here simplified, until it is brought within the range only of that lateral and vertical variation acccssorary to the adjustment of the instrument to the travel of the team, and the depth at which it is to operate. The fact that No. 2, working at the depth of 12 inches, after a light span of horses, driven and held by a boy, for a whole day, with ease to himself and team, and the work performed in such a manner, as to call forth the unqualified approbation of numerous intelligent farmers, is conclusive as to ease of draft, &c. The ultimatum as to strength has not yet been reached, even by powerful teams. (See advertisement.) D. O. PROUTY.

Philadelphia, Oct. 12, 1843.

TOMPKINS COUNTY FAIR.

MESSRS. EDITORS—The annual Agricultural Fair of this county came off on the 28th and 29th ultimo, attended with sunny weather and a multitude of spectators unprecedented on like occasions. The stock, of all kinds, exhibited was not as numerous as usual, but far better in quality, especially horses and cattle. Among the latter was a two year old half blood Short Horn bull (crossed with a Leicester,) owned by Mr. J. R. SPEED, and bred by the indefatigable corresponding secretary of the State Society, Col. H. S. RANDALL, whose beauty of outline approached so nearly to the full bred Durham as to deceive many, and which proved most conclusively the skill and good taste of the breeder, as well as extended the reputation of his fine herd. A number of half blood Short Horn heifers were exhibited, which tended more than ever to impress our farmers with the superior excellencies of this favorite breed, and will doubtless result in immediate steps with many to more extensive improvement of their native stock. So recent has been the introduction of Durham stock into our county, that few comparatively as yet have availed themselves of it; but those who have, and exhibited the cross, I hardly need say, ran away with the chief prizes. An extraordinary 3 year old heifer, of native breed, was shown by Mr. CHARLES MORRELL, pronounced by several who were at Rochester to be quite equal to any thing of like age exhibited there. This animal indicates Durham descent, not only in form, but propensity to fatten, as she is now in high flesh, although her calf has but recently left her side, was never fed a quart of grain of any kind, and her pasture during the present season but ordinary. Her weight, while suckling her calf, was nearly 1300 lbs. The sire and dam were of native stock, and only mediocre in every respect; and my sole object in introducing her to your notice, is to impress upon our farmers the necessity of practicing the utmost vigilance in selecting only those animals which embrace the most numerous points of excellence to breed from. This heifer is clearly an *accidental;* at a single bound she has gone back, no one knows how many generations, and exhibits the excellence of some one of her progenitors. It might have been otherwise, and thereby shown glaring defects instead of beauties. This propensity with animals as well as with the human family, is by no means rare. Indeed, a striking instance was presented on the day of the Fair, in the cow belonging to the president of the Society, Mr. WOOD, which took the first premium as to form, and a very perfect animal she was, yet had one of those ill formed "pumpkin-rumped" calves by her side, and has produced several of them, although no bull has been used of that breed! In conclusion, let us all beware, and breed from such stock as partakes most of general excellence, as from so doing general excellence can only be secured with uniform certainty in all after generations.

Of swine, the Berkshires took the prizes, of which there were some capital specimens, quite equal to those exhibited at the State Fair, having originated from some of the best stock in the state. Some very good Merino sheep were exhibited by Mr. J. R. SPEED, and a lot of Saxons by Mr. A. C. BOYER; a ewe among the latter would have been hard to beat any where. The wise discrimination, this year, of manufacturers, in their wool puschases, will call out more of this heretofore neglected breed at our Fairs hereafter.

Though last, but by no means least, it affords me great pleasure to notice the full bred Short Horn bull, "*Remus*," at the exhibition, purchased at the late Fair at Rochester by the Hon. E. MACK and Messrs. C. L. GRANT & GODDARD of Ithaca. He was bred by that man who has a heart as noble and big as himself, and who has, by his kind and urbane deportment, won the hearts of every member of the State Society: I mean ADAM FERGUSON of Canada. He is four years old, roan, and pedigree pronounced very good, which I regret having lost, otherwise would here present it in part. He is not as "well set up in the tail," (as breeders say,) as many others I have seen, but in nearly all other respects he is a very good animal; and the word of Mr. Ferguson has been passed, which is that of a man of unimpeachable veracity, "that all his stock gettings are very fine." From the fact of his having been so recently introduced into the county, he was not considered by the committee as eligible for a premium. This enterprise on the part of the above gentlemen is highly commendable, and will result most beneficially to the county, as I understand quite a large number of farmers have already signified their intention to avail themselves of Remus' services.

I regret to say that the *in door exhibition* was not as attractive as last year; yet, judging from personal observation of like exhibitions elsewhere, it would compare favorably with those of the most favored societies in the state. The fruit generally, and peaches especially, grown by Mr. JULIUS ACKLEY of Ithaca, were superior to the Rochester display; and of carpeting of all kinds, as well as harness, saddles and trunks, besides many other articles of the useful, are rarely surpassed. What the exhibition lacked in attraction, chiefly, was the *or-*

namental—embroidery and fancy needle work, a display of which was made last year, which reflected greatly the fine taste and industry of our farmers' daughters. A *piano* made in the county was presented, and pronounced by qualified judges to be quite equal in tone and finish to the average of those made elsewhere; besides several well executed oil paintings and pictorial engravings, by artists of Ithaca. I had proposed some observations on the great importance of these in door exhibitions, but want of space will compel me to defer giving them until another time.

Although a large proportion of the farmers returned to their homes on the evening of the first day, yet very many returned to participate in the proceedings of the second, which went off with spirit, and not a little of enthusiasm. Five teams entered at the plowing match, and although all exhibited good work, yet the prize was won by the *Southard plow*, as yet "unknown to fame," beating two other teams attached to the celebrated Livingston county plows. This was a decided triumph for Mr. Southard, who is a native of the county, quite a mechanical genius, and his improved plow is the result solely of his inventive powers.

Early in the afternoon a procession was formed and marched, attended with a band of music, together with the intrepid fire companies, in their showy costumes, and drawing their beautiful engines, to the Methodist chapel, to hear the address, which was delivered by Mr. J. J. Speed, Jr. of Ithaca. The orator had himself been a practical farmer, and in changing his profession, he acknowledged he had taken a "Paddy *hoist*, and jumped two pegs *lower*;" that in his estimation no avocation could be more exalted and reputable than that of farming; but however reputable it might be, yet he regretted to say that that independence which should be its concomitant had been latterly too much sacrificed by the extravagance of farmers generally; that too many, instead of holding aloft their heads like independent farmers, and indulging in no fear of looking any man and all men in the face, they skulked behind corners and by streets to avoid their needy creditors; hence he urged us never to buy beyond our capacity to pay whenever the creditor demanded his just dues, and especially never run to a bank to borrow, as bank officers were the most superstitious of all men, being rigid observers of *set hours and days*, and demanded equally rigid observance on the part of those who worshipped at *their shrine*. The importance of bestowing more attention in making and judiciously disposing of manure, was forcibly shown; that a contrary course would, as it has in a thousand of instances, impoverish our farms and ourselves, and compel to the west, where very many have the poor privilege of working four hours of the day, and shaking with fever and ague the other twenty. He drew a humorous picture of the slattern farmer, who, among other items, permitted his pigs to trespass within his door yard, nay, within his dwelling, and thereby to sour the temper of his amiable half, to breed dirt, discontent and misery, where only should be cleanliness, therefore health, sweet tempers and cheerfulness, therefore happiness. My space will not permit me to notice any further the well chosen topics of this address. After it was concluded, the reports of viewing committees were read, and officers of the Society elected for the ensuing year.

Thus ended the *fourth* agricultural exhibition of Tompkins county, with a unanimous feeling that we have effected much good, and the future is full of promise of effecting still greater.

I had intended to have accompanied this with a notice of an agreeable visit to Owego, to attend the Tioga Fair, but must defer it to another time. Your friend,

L. A. Morrell.

Lake Ridge, Tompkins co., Oct. 2, 1843.

LETTER FROM IOWA.

Messrs. Editors—The farmers inhabiting "Northern Iowa," have harvested a heavy crop of wheat, free from either rust or smut. In the southern portion of the territory, however, the wheat was mostly "winter killed." Notwithstanding the severe drouth through June and July, the August rains will produce good crops of corn, potatoes, &c.; hemp will not, however, be so good.

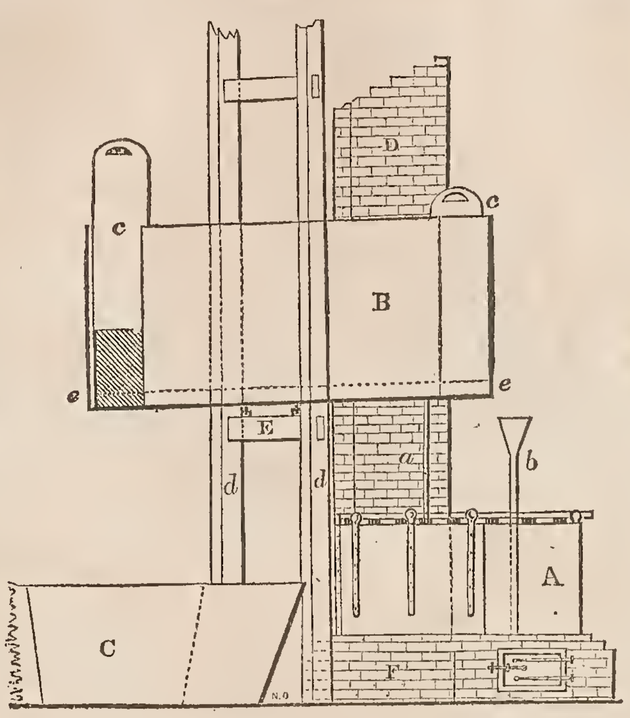
From recent observations, I am satisfied, that there is no region of country in the United States, better suited to the raising of sheep than Iowa. In fact, we have a great country; one of the noblest rivers in the world wash its eastern border for 650 miles; the Missouri river on the south, the St. Peters on the north, and numerous tributaries intersect the country, which furnish water power in great abundance. There are some beautiful cascades in the interior. We have a rich soil, a salubrious climate, numerous springs, and the earth contains her endless stores of minerals.

Wild plums, apples and cherries, are large and abundant, and the fruit of the oak seldom fails. And as the doctors say, it is "distressingly healthy."

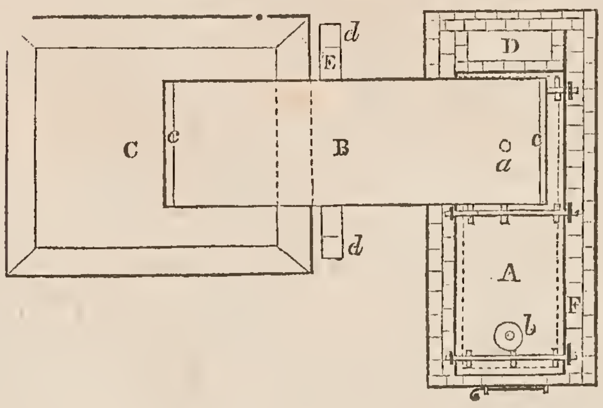
Send us on some of your enterprising men, however poor they may be in regard to dollars and cents, *provided always*, they have capital in the shape of *industry and perseverance*. A man who cannot support a family in Iowa, should be expelled from either hemisphere or or translated to the moon.

I know of no commodity, wares or merchandise, that go off with such rapidity as do girls; and a married lady coming to our territory, should always bring along at least one *single* sister, or sister-in-law.

Dubuque, Iowa, Sept., 1843. John King.



Elevation.—(Fig. 90.)



Ground Plan.—(Fig. 91.)

References.—A. A. Boiler—B. B. Steam Box—C. C. Vat—D. D. Chimney—E. E. Cross piece between stanchions, on which the steam box rests and turns—F. F. Arch.

a. a. Conductor—b. b. Feeder—c. c. Shutters which slide in grooves—d. d. Stanchions—e. e. False bottom to steam box.

MR. FIELD'S ROOT STEAMER.

Messrs. Gaylord & Tucker—At the earnest solicitation of Mr. Arnold Field, before his death, I have made a drawing of his Root Steamer, which he had used for the last five or six years with such perfect success, that he was desirous for the benefit of pork growers generally, his system of cooking food for fatting pork should be known; and at his request, I enclose the drawing with a description, that you may exercise your judgment on the same, and publish it if you deem it worthy of notice.

I observed in the last number of the Cultivator, a plan of a root steamer, which in some respects must be inconvenient; one in particular, in taking the roots from the steam box. In the plan before us, this is remedied by the box being on hinges and easily turned, and its contents emptied into a vat, to be mixed with meal, &c. The boiler as well as the steam box is made of two inch plank; the boiler bottom is made of sheet iron, for which cast iron may be easily substituted; but sheet iron one-sixteenth of an inch, I think is far preferable. The drawing is made on a scale of one inch to four feet, which makes an apparatus of sufficient size for the use of most of farmers. The steam box containing about 15 bushels, which, when the steam is up, can be steamed in fifteen or twenty minutes. The building to contain such an apparatus, should be built one and a half or two stories high, as the steam box is filled from the second floor while standing in a vertical position, and then turned down and rests upon the conducting pipe, which is made of wood. The feeder is also made of wood, and attached to the boiler in such a manner as to run to within half an inch of the bottom, to prevent escape of steam, and through which water is conducted to the boiler. The water is drawn from the boiler by means of a tube and stopcock. The boiler should be placed over the arch in such a manner as to prevent any fire or extreme heat coming in contact with the lower edge of the box, as is represented by dotted lines in the horizontal projection. A board one inch thick is made fast two or three inches from the bottom of the steam box, in which numerous half inch holes are bored, in order that the steam may be equally distributed throughout the mass. The steam box should be a little inclined, that the water which is condensed may run out.

The drawings are made on the plan of horizontal and vertical projections, which may be easily understood by considering the eye above the apparatus in the horizontal projection or plan, (fig. 91.) and in front in the vertical projection or elevation, (fig. 90.)

The total cost of the above described apparatus did not exceed twenty dollars, and may be built much cheaper.

Very respectfully,

H. B. Field, U. S. Army.

New Berlin, Chenango co., N. Y., Oct. 12, 1843.

THE FARMER'S MANUAL.

A Practical Treatise on the Nature and Value of Manures, founded from experiments on various crops, with a brief account of the most recent discoveries in Agricultural Chemistry. By F. Faulkner, and the author of "British Husbandry;" 153 pages 8mo: published in New-York by D. Appleton & Co., 200 Broadway, and in Philadelphia by George S. Appleton, 148 Chesnut-street. Price 31¼ cents, or bound in cloth, 50 cents.

This is a cheap reprint of a recent British publication on that branch of agriculture which relates to manures, as well as to discoveries in the science of this most valuable art. Whenever a business or employment is carried on without knowledge, order or system, it is unskillfully managed, and generally unproductive. Such has frequently been the case in agriculture, but the doubts, the mistakes and the losses have awakened farmers in Europe and in a portion of the United States to their true interests, the study of the sciences connected with their art. Hence we find an increase of publications on agriculture; and the one recently published, whose title we have given above, is very valuable to the farming interest, because it is cheap and concise, and is not so much encumbered with learned and technical phrases as some others which have been published. The author divides his subject into three parts: 1st, animal and vegetable manures; 2d, mineral and artificial manures; 3d, on the management and application of manures. The first part is divided into six chapters, the second into five, and the third into twelve; from every one of which the practical farmer may take some hint or reap some real advantage.

We first opened the book with some prejudice, as our eye caught the title, "The Farmer's Manual," directly over which, on the margin of the cover, were the words, "*Muck is the mother of money.*" Here we thought was some quackery, or some plagiarism from the publication of our countryman, Dr. Dana, by an alteration of the title of his work, "*A Muck Manual for Farmers.*" But as we proceeded in the perusal of the volume before us, we became more and more interested, and found that though treating on the same subjects with Dr. Dana, it was done in a different manner, and easier for the reading farmer to comprehend.

The object of the treatise is said to be "to explain the nature and constitution of manures generally; to point out the means of augmenting the quantity, and preserving the fertilizing power of farm yard manure; the various sources of mineral and other artificial manures, and the causes of their frequent failure."

We found, too, that the author of the "Farmer's Manual" used the word "muck" in a different sense from Dr. Dana. Our countryman means, by muck, the black sediment of ponds, swamps and peat bogs; while Mr. Faulkner means by the same word the barnyard compost, consisting of various animal and vegetable substances, mingled with such earthy and saline ingredients as are known to add value to artificial and barnyard manures.

We were pleased that the Farmer's Manual had preserved the word *humus* and its general acceptation among farmers, instead of the uncouth term "*geine*" employed by Dr. Dana, a word derived from the Greek language, and difficult to pronounce. The term *humus* has been in use among agricultural and periodical writers so long, that farmers have become familiar with its sound and meaning; and we hope that Dr. Dana, in the next edition of his "Muck Manual," will restore it and abandon "geine," as it is difficult to fix the pronunciation of this latter word, and whether it be of one syllable, pronounced as *gine*, of two syllables, as *ge-ine*, or of three, as *ge-i-ne*.

In countries which have been ages under cultivation, crops cannot be profitably raised without manure. The author of the Farmer's Manual on this subject advises the following course:

"To increase the quantity of manure raised on the land, should, therefore, be the constant aim of every farmer; every portion of apparently refuse vegetable and animal matter should also be carefully collected and added to the dung heap, and in this manner it is inconceivable what additional quantities of excellent muck may be produced." (Page 24.)

This *muck* or barnyard manure requires the attention of every farmer, and our author says that "in the *management of farmyard manure* two primary objects present themselves: first, to prevent waste of every kind; and secondly, to increase the quantity of dung by every means in the farmer's power. The waste is effected in the manner before alluded to, by unnecessary and excessive fermentation, by which the organic parts are dissipated in a gaseous form, and by suffering water to run through the dung, by which the inorganic substances, the salts, are carried away in solution. No dung should be allowed to ferment until a few weeks before it is put into the soil, and then only in that slight degree as to render it manageable, and to facilitate its decomposition when in the soil." (Page 69.)

If heretofore there has been a want of care in the management of farmyard dung, it is no reason, our author thinks, (p. 75,) why that negligence should continue among farmers of the present day. Hence, if a cultivator of the soil turn his attention to the subject of manures, he can, by directions contained in the Farmer's Manual, increase both the quantity and quality of his compost or *muck* (in the author's sense,) to a great extent. The author thinks that such compost is preferable to most artificial manures. He observes as follows, (p. 92:)

"The principal advantages that *farmyard dung* possesses over *artificial manures* have already been stated, namely, that it contains *all* the elements of plants; is more attractive of moisture, and by its decomposition in the soil, produces an increase of temperature. To these may be added its more permanent effect: artificial manures, though they are less perfect and generally more transient, are more forcing in the early stages of the growth of plants. These qualities may be united with excellent effect, by using both with the same crop, and especially with the turnep crop."

With respect to inorganic or saline substances employed as manure, the author says, (p. 124:)

"From the foregoing considerations, and what we have previously said upon this important subject, it must be evident that it is trifling with land, and calculated to produce frequent disappointment and loss, to apply any one salt as a substitute for manure."

From these extracts we may form some idea of the value of The Farmer's Manual, which contains many sensible and practical remarks. The extract from page 69, about the management of manure, and waste by excessive fermentation, accords with the practice of some farmers in the southern part of the state of New-York.

Although the author tells us how a heap of manure is injured by fermentation, he omits to inform us how the loss by gaseous exhalation may be arrested. In some cases we require well rotted manure; in other cases it is necessary to give it to the land before fermentation has proceeded too far, exactly as he describes and we practice here. But when we want manure well rotted by complete fermentation, the gases which cause the waste, if suffered to rise into the atmosphere, are principally *ammonia* and *carbonic acid*, and may be preserved and retained in the fermenting manure heap, by plaster (gypsum) and caustic potash. The ammonia will decompose the plaster, and the potash will attract the carbonic acid, and all the materials will be retained. Such we believe would be the effect, if when making a manure heap, ground plaster and caustic potash were sprinkled between the layers, as the manure was hauled out or heaped in the barnyard. The author of the Manual (taking it from Liebig,) recommends the sprinkling of plaster in stables. This we have tried and found effectual in rendering horse stables as sweet as a house, and also in depriving hog manure of its offensive smell, as well as correcting the effluvia from privies.

In the extract from page 92, Mr. Faulkner gives the preference to *farm yard dung* over artificial manures, as containing *all* the elements of plants. This will be the case when his *muck* is composed of the droppings of horses, hogs and cattle, mingled with soil or peat, &c. But in this country and in this part of it, the contents of most farmers' barnyards do not contain the materials to supply all the elements. We know of some that do, but they are not numerous. There is Mr. S., who buys no manure, makes abundance, and clears out his barnyard twice a year, for his spring and autumnal crops. In the fall of the year, when his yards are clean, he first makes a layer of seaweed, then of black mud or muck from a peat bog. Over these his cattle run, and their droppings add to the mass. Once a week, his stable, containing several horses, is cleaned out, and its contents spread over the yards. The hay, the straw and the cornstalks, dropped and wasted during the winter in foddering his cattle, increase the contents of the farm yard. Add to these the cleanings of the hog pens, and there is formed a mass of mixen, muck or barnyard manure, containing all the elements required by plants. This mass is heaped in the spring, partially fermented, and applied to the corn and potatoe crops. The yards are again littered in the same manner, and a large and valuable compost is made and ready for the crops of winter grain.

The author of The Farmer's Manual is correct in his opinion of the fallacy of trusting to any one salt as a substitute for manure, such as lime, saltpetre, soda, common salt, &c. A soil, to be improved, requires animal and vegetable substances to be decomposed beneath the surface to form humus, and inorganic substances superadded, sometimes lime or potash, or gypsum, &c.

We did not intend to extend our remarks to such a length, and we therefore close by recommending to all concerned and interested in the matter to read "The Farmer's Manual," as we have done, with satisfaction and profit.
A Practical Farmer.

Staten Island, August 19, 1843.

MANAGEMENT OF BEES.

Messrs. Gaylord & Tucker—I wish to make known through the columns of your Cultivator, a few experiments on transferring and managing bees. I commenced last spring, with two small old box hives; one had a swarm of two years old, the other a double swarm of the preceding year. The first gave a swarm the last day of May, weighing 6½ lbs., which was hived in the subtended hive, (patented by J. M. Weeks, Vt.) In the fall I took from them 20 lbs. of surplus honey, leaving 36 lbs. in the two lower sections for their own consumption. The double hive gave a small swarm June 15th, which was also put in the subtended hive. The bees from the old hive I transferred to an empty hive, following the directions of Mr. Kelsey. He says: "As the queen lays all the nits or eggs, which hatch in twenty-two days, excepting the drones, which hatch in twenty-four days, and the old and only queen comes out with the first swarm, leaving the hive destitute of a queen about seven days; and the first young queens that do hatch, come out with the second and third swarms; but if they should not, it is about two weeks before a young queen comes to maturity so as to lay nits, during which time all the young bees in the hive hatch. So reason and experience has taught me to drive them out on the 23d or 24th day after the first swarm, when there is no loss of young bees in the combs."

I also transferred several for my neighbors with the same result. The old hive was nearly filled with bee bread, having only 5 lbs. honey. In three weeks after, they had the new hive filled with combs, and gave me 14 lbs. surplus honey in the fall. Finding the other hive, (double swarm,) harrassed with moth, and by all appearances becoming weaker, I concluded to transfer them to save their lives. With this colony I took Mr. Weeks' directions: "Immediately before, or forthwith after the second swarm has left the hive." With this hive I operated the day previous to second swarming. Finding many brood combs filled with young bees, I set the hive away in a warm place, where it stood two weeks, before I removed the contents.

I found about a pint of bees hatched while standing there. I also discovered a queen cell which had been evacuated. I endeavored to transfer the bees to a drawer, but without success, until I discovered a bunch of bees on the floor, in which I found a young queen. I escorted her majesty to her intended habitation. Forthwith her subjects seemed to convey the news from one to the other, and in a few minutes they became reconciled to their home. I placed them before a knot hole fifteen feet from the ground, where they went to work and filled the box about one-third full.

Sometime in August, they sallied forth out of the hive a few minutes, and then returned, which they did for several days. On examining the box, I found the moth had destroyed nearly all the combs. I then took the queen from them, and left them to their fate; but they soon united with the other bees. I kept her three weeks for the examination of myself and neighbors, and I wish Mr. Palmer had had an opportunity of seeing her. In the fall I united the double swarm with her own again. I then went to my nearest neighbor and got a sufficient number of bees, (of those he intended to murder,) to make a good colony; and put them in the hive I took the bees from, and fed them a few pounds of honey, to make 25 lbs. for their winter store. I would recommend transferring all bees after the combs are two or three years old, in preference to pruning the combs, seeing it can be done without the loss of any young bees. For an easy plan to get the bees out of their hives, I would recommend any who wish to try it, to Francis Kelsey's Treatise on Bees, page 14. Yours,

Ulster, N. Y., 1843. J. Wells.

VERY IMPORTANT TO FARMERS.

A new edition, improved and greatly enlarged, of the Bommer Manure Method, secured by United States letters patent.

Agriculturists, although you have favorably received the first edition of my method, and though, as it appears from numerous testimonials in the agricultural papers, it has given satisfactory results, I have nevertheless seen that this first edition was too incomplete, and that from the numerous questions which have been addressed to me by my subscribers, I have, like them, felt the want of a commentary upon the instructions, and clear and precise explanations upon various points of the application of the system, so that it may be better comprehended and more easily put into practice.

I have written a new work which is more complete, and which, I hope, will meet with their approbation.

It does not become me to judge of the merits of this new edition; nevertheless, I think that I can give the assurance that, in this work, the system is so improved, and its application rendered so easy, that the least intelligent farmer, in faithfully conforming to the prescriptions and instructions therein contained, cannot fail of success in his operations.

This work resting upon facts and practical results, which are conscientiously reported, is presented to you with confidence. Try and judge.

The work is divided into two parts. The first contains the method in all its simplicity.

The second contains explanations and analytical developments of the system; instructions upon its application; some new processes; solution of manure questions of high importance; and lastly, supplementary articles consequent upon the system.

To give you an idea of the new edition, I will cite part of its contents. The first part of the method contains,

1st. Two different processes, by means of which any one can cause, in a few days, the decomposition of all straw and green or dry vegetables, and their conversion into a rich, unctuous and durable manure.

2d. Two processes, one by high fermentation, and the other by moderated fermentation, by means of which any one can reduce all kinds of turfy or swampy matter into a rich vegetable compost or mold.

3d. A process, without fermentation, to reduce all kinds of swampy matter, pond mud, slime from rivers or the sea shore, street mud, black earth from the woods, &c., into a superior mineral compost.

4th. Two processes for preparing compost with earth.

5th. The means to augment and ameliorate manure heaps.

6th. The means to prepare "purin," a fertilizing liquid for irrigation.

7th. The employment of dregs or lees, and residues of manufactories.

8th. A process for reviving the heat under garden beds, without changing the litter.

These various operations are represented by nine designs, each occupying its respective place in the work.

Second part, first section.

1st. Vegetable compared with animal manure.

2d. Four principal advantages of the Bommer manure over that of cattle.

3d. A dissertation upon fermentation, the gravest question upon the subject of manure.

4th. Opinion of authors upon the question, "Should manures be fermented or not?"

5th. My opinion upon the question.

6th. Appropriation of my manure to different earths.

7th. Appropriation of my manure to various plants.

8th. Solution of the problem put by Payen, the celebrated chemist. He says "that the art of manures consists in the avoidance of the too great solubility of materials which decompose too easily, and to render soluble those which decompose with too much difficulty."

9th. The nourishment of plants, and of what they are composed.

10th. Vegetable metempsychosis, or transmutation of a dead into a living vegetable.

11th. Economy—how to cause it.

Second section.

1st. Four different qualities of saturated water.

2d. The disposal of the place of operations in different ways.

3d. Ley ingredients; means of procuring them without expense; their fertilizing value.

4th. Retrenchment of three ingredients which are not absolutely necessary in the ley.

5th. Employment of ground bones, horn shavings, saw dust, ground charcoal, blood and other residues of butcheries and salting establishments.

6th. Table for the reduction or augmentation of the ley ingredients, so as to appropriate the manure to the soil and plants.

7th. Variation of the quantity of the ley ingredients, according to the size of the heap.

8th. The least and greatest quantity of materials which can be employed in the fabrication of Bommer manure.

9th. Virtue of the ley—wnat it is.

10th. A simple process to render manure as short as you wish.

11th. How to reduce leaves to manure.

12th. Reasons why the heap ought to be covered with stray or hay, and not with solid or compost materials.

Section III.

1st. Proportions to observe in the mixture of turfy or swampy materials with vegetables, and why.

2d. The most favorable season for the preparation of composts after this method.

3d. Is it advantageous to use composts in a fresh state?

4th. Regulations to observe in the manufacture of composts.

5th. European composts or molds compared with mine.

6th. Poudrette compared with my composts.

7th. Means considerably to augment the manures of a farm.

8th. Immense advantages of the employment of human excrements and animal dejections.

9th. Effect of watering with "purin" or manure liquor, urinous, putrified water, compared to that of my mineral or earth composts.

19th. Liquid manures compared with my composts.

11th. Enumeration of 24 principal advantages of this method.

Section IV.—Supplementary Articles.

1st. Analyses of earths; simple means to detect the nature of earths without the aid of chemistry.

2d. Advantage resulting from this analysis.

3d. Interest which every one has in knowing the nature of his lands.

4th. Means to detect marl.

5th. Division of manures, and its advantages.

6th. Preservation of manures; mode in use compared with that which I propose.

7th. This method is already in use on a great many farms; results which have been obtained from it.

The matter of the new edition occupies about 100 pages; it will be henceforth furnished to subscribers instead of the abridged method, which contained but 20 pages. The price of the patent right is definitively fixed as follows:

Farm with garden, not over 20 acres, ...	$6
" " " 100 "	10
" " " 200 "	16
" " " 300 "	18
" " " 400 "	20
Over 400 acres in any one farm,..............	25

The method cannot be taken for only a portion of a farm, and every subscriber is required to declare the whole extent of his arable land.

By the necessary documents recorded in the Patent Office, the right for the southern and western states is held by Abbett & Co. of Baltimore, and for the northern and eastern states, viz: New-England, New-York, New-Jersey, Pennsylvania and Delaware, by Georg

Bommer of New-York, who keeps his office at 75 Greenwich-street. Farmers living in the northern states who desire to buy the true method, are invited to send to my office or to my agents. The only agents established by me, and who are authorized to sell my patented method, are Messrs. **Eli Barnett** at Westville, Connecticut, general agent for the New-England states, and **H. D. Robinson** at New-Brunswick, New-Jersey, principal agent for the state of New-Jersey.

All agents hereafter appointed will be announced in the newspapers of the respective counties and states. Principal agents who may appoint sub-agents, are bound to give notice to the agricultural public through the press. Whenever this announcement is not made, the farmer should be on his guard not to be duped by counterfeiters, (who have already arrived,) and who will not fail to offer them false methods for their good money.

To facilitate the circulation of my method, a register is opened with each postmaster, where farmers, who have the intention to buy it, can subscribe. These postmasters will address every month a list of subscribers to my office, or to my principal agents in the respective states. The postmasters will receive, in the course of the next month, instructions for their guidance under the circumstances.

Every subscriber who, having paid the price, should not receive the method in due time, will please notify me of the delay, (at 75 Greenwich-street, N. Y.,) when it will be immediately attended to.

Farmers, take notice that *Mr. H. Heermance of Kinderhook is not my agent.*

In order to prevent the frauds and to counteract the manæuvres of some rapacious individuals always ready to invade the rights of others, I will serve them up to the agricultural public, as they present themselves; and in this, I count upon the support of the press, who are also interested in denouncing to the public those who meditate injury to them.

Finally, it should be known that all copies of the method for the northern and eastern states are signed and sealed by myself, and those of the southern and western states by Abbett & Co.; that any method embodying our instructions, which should be circulated under any other name, will be considered as false and counterfeit, and that those who make use of it will be prosecuted according to law.

Those who desire to buy the right for a state, or for one or more counties within my limits, can address me at my office, or my principal agents in the different states.

All editors of newspapers who have more than 400 farmer subscribers, by inserting the present article entire, and accompanying it by a small editorial article, shall have a right, with a copy of the method, to its fullest extent, with the privilege of ceding the right to any of his friends, if he should not himself be a farmer. To be entitled to the above privilege, he will address to my office the journal which contains the insertion in question, and the method will be immediately forwarded. If the editor intend to cede his method to another person, he should inform me, post paid, and send me the name and residence of the person to whom he wishes to cede it. **George Bommer.**

New-York, Sept. 13, 1843.

SHEEP ON THE PRAIRIES.

Messrs. Gaylord & Tucker—I beg to oppose Mr. Jewett's conjectures on the subject of "*growing wool on the prairies*," by the results of a few years' experience. I have been engaged in growing wool in a small way for twenty years, in the hilly and mountainous region of eastern New-York. *There* my sheep did well; here I think they do better. The quality of the wool is improved; the quantity is increased.

I have found no evil resulting from Mr. Jewett's great objection to our country, that it is "generally level." On the contrary, this feature of our region is favorable to a free circulation of air, sweeping away (if any) those annoying insects and dispersing the deleterious miasma of which Mr. Jewett complains; thus furnishing a "lodging ground" where the sheep can breathe the "free and pure air," without subjecting them to the extra labor of climbing the hilly eminence or mountain top for that purpose.

Mr. Jewett's second great objection is, "that their winters are not so severe as with us." I know nothing of Vermont winters, although I have heard of "fearful storms" there, but I have seen some fifty winters in the highlands of New-York; yet have I never known such general uniformity of the seasons, summer and winter, spring and fall, as I have experienced here, including the winter which Mr. Jewett's information tells him "held out *five months* longer than usual." Could Mr. Jewett see our *millions* of acres of unoccupied prairie, covered with luxuriant herbage, affording the best of pasture and hay, which is annually given to the flames, he would have no fears of "overstocking" for long years to come; when, however, that arrives, we too, I trust, shall be able to point to our fields redolent with the sweets of white clover. Nor have I experienced much loss from wolves—less than 3 per cent per annum. The large mountain wolf of the east is unknown here; the cat-like *prairie wolf* is a small, cowardly thief; singly, they rarely attack a flock of grown sheep. They are mainly troublesome in stealing lambs, and that risk is constantly lessening. As sheep increase, wolves disappear; they have no mountain fastnesses to which they can retreat.

I have no *experience* with which to oppose Mr. Jewett's second class of objections, viz: those growing out of the distempers *that may prevail* among our sheep. I can only say that I do not believe our flocks are in more danger of disease of any kind here than in Vermont or elsewhere. I know of no existing predisposing cause, either in the climate or the soil; nor can I perceive any reason why we may not as successfully resist its attacks, when found upon the plains of the west, as when raging among the hills of the east.

In conclusion, I venture the remark, that had Brother Jewett done himself the justice to have first made the acquaintance of the "Great West;" had he witnessed our flocks cropping the rich aromatic herbage of our warm, dry, rolling prairies, or quietly ruminating under the umbrageous foliage of the old trees of our "oak openings," if he did not conclude to change the pasture of his own flocks, and himself become a "Sucker," he would have returned convinced that Weybridge in Vermont was not the only place in the world where wool may be grown to advantage.

Edward W. Brewster.

Little Woods, Kane Co., Ill., Sept. 22, 1843.

NEW-YORK STATE AGRICULTURAL FAIR.

Report of the Committee on Plows.

The committee on plows would respectfully report, that they have attended to the duties assigned them, which, the Society are aware, were neither few nor small. We have the satisfaction, however, of acknowledging that we were furnished every facility for testing the traction of plows by the competitors, who, we are happy to say, manifested a very laudable zeal in rendering us every assistance in our work; and, although laboring under the strong excitement incident to a competition for the highest prizes offered by the Society, and upon an article most important to the farmer, treated each other and the committee with a degree of urbanity highly creditable to this class of mechanics. We had the use of four dynamometers—one belonging to the Society; one upon the same construction, but a better instrument, furnished us by S. W. Chase of Amsterdam; one of a spiral construction, numbering as high as 1200 pounds, but not sufficiently minute for our purpose, by G. D. Avery of Chenango county; and another, the most serviceable, invented by A. K. Cone, called the "Scale Beam Dynamometer." Mr. Chase also kindly furnished us a windlass and small wheels, ropes, &c., and Mr. Avery, pulley-blocks, measures, &c., which very much expedited the business before us, and for which we would tender them our thanks.

On the morning of the 22d, we were met by a large number of those interested in the manufacture of plows, and proceeded to the trial with the dynamometer. Each plow was drawn by a windlass through a stiff sward, the distance of five rods, and required to cut a furrow twelve inches wide by six deep.

The following plows were tried, and the average of their resistance taken, as indicated by the dynamometer:

Names of Ploughs.	*Makers or Patentees.*	*Pounds draft.*
American,	M. H. Codding, Bristol, Ontario co.,	330
Cayuga County,	P. D. Wright, Rochester,	388
Worcester County,	E. Davis, Watertown, Jefferson co.,	386
Diamond,	H. Delano, Mottsville, Onondaga co.,	365
Peekskill,	T. Mercer, Peekskill,	348
Williamsport,	S W. Hall, Williamsport, Penn.,	337
Montgomery County,	S. W. Chase, Amsterdam,	355
do	(larger size,) do	375
Opposition,	C. Seymour, Lockport,	397
Washington,	I. S. Teft, Williamville, Erie co.,	381
Oxford,	Oxford, Chenango co ,	371
Ontario County,	R. C. Stiles & Co., East Bloomfield,	431
Veto,	I. Waite, Albion,	335
Wyoming County,	Hicks & Bailey, Perry, Wyoming co.,	383
Oneida Chief,	E. Wilson, Vernon, Oneida co.,	381
Caledonia,	P. Elyea, Caledonia, Livingston co.,	345
Middleport,	I. Van Bronklen, Middleport, Niagara co.,	438
Eagle, (Mass.,)	Ruggles, Nourse & Co.,	415
Genoa,	T. D. Burrell, Geneva,	397
do (shell wheel,)	T. D. Burrell,	298
so (Scotch shell wheel,)	T. D. Burrell,	325
Locklin Improved,	I. C. Fitch, Dansville, Livingston co.,	483
Iron Beam,	E. Richardson, Bushnell's Basin,	388
Livingston County,	H. Wiard, Avon,	400

We ought here to observe, that some of these plows were of a larger size than others, and their surface draft of course greater, as the Livingston County, Ontario County, and some others. Some of them were highly polished, while others were nearly as rough as they came from the molds. Some were provided with very sharp coulters, while others had merely a cutter upon the shin, which made a very manifest difference. Many of them came unprovided with a gauge wheel, and the difference of draft was so great, with or without a wheel, that those who had not a wheel, borrowed one before they would go through with a trial. Your committee think this point settled in the minds of every one who saw this trial, that a wheel is an indispensable accompaniament to a good plow in sward land, or indeed in almost any other. There was also a difference in the dynamometer, as Mr. Chase's, which was injured after the trial of four or five plows, indicated every ten pounds, while the scale beam, afterwards used, indicated only every thirty pounds.

After we had gone through with a very thorough and laborious trial with the windlass and the dynamometer, we proceeded to try them with a strong pair of horses. Each competitor was allowed to hold his own plow until it run to suit him, and then it was held by one of the committee. We gave them a thorough trial in this way, and proceeded to compare their relative merits as to construction and workmanship, and heard explanations of their peculiar merits from their proprietors.

Having thus obtained what information we could as to their traction, and compared their relative merits as to construction and durability, your committee came to the unanimous conclusion that we could not award premiums as published by the Society. We are not prepared to say, neither do we believe any judicious man would say, that either of these plows were so superior to the others as to entitle it to the large premium of $50. They were all superior plows, and the more we examined them, the more we were convinced that such a collection was never seen before in this or any other land.

We therefore proceeded to divide the highest premium among the largest sized plows, giving the

"Caledonia," P. Elyea of Caledonia,	$25 00
"Wyoming," Hicks & Bailey, Perry, Wyoming county,	15 00
"Williamsport," S. W. Hall,	10 00

The remaining premiums were divided among plows of the second size, as follows:

"American," M. D. & M. H. Codding, of Bristol, Ontario,	$15 00
"Geneva," T. D. Burrell of Geneva,	12 00
"Montgomery County," S.W. Chase of Amsterdam,	10 00
"Oneida Chief," E. Wilson, Vernon, Oneida county,	8 00
"Veto," I. Waite, Albion, Orleans,	5 00

We also recommend that diplomas be given to the "Iron Beam" and "Peekskill," and volumes of the Transactions to the "Livingston County," the "Cayuga County," and "Diamond" plows.

Your committee also witnessed with great satisfaction the trial of a plowing machine or gang of plows, constructed by Thomas Wiard of Avon, and have no hesitation in recommending it as an article of much importance to the farmer. The facility and great rapidity with which it prepares fallow grounds, plows in wheat, covers peas and other spring grain requiring a deeper covering than the harrow gives, render it a very desirable article to the farmer. We had not only ocular demonstration of its performances, but were shown very high commendations from some of the best farmers in Livingston county. We therefore recommend the awarding of a diploma to Thomas Wiard of Avon, for his gang of plows.

Of sub-soil plows, only two were presented, both of which were thoroughly tested and highly approved by the committee. We believe the sub-soil plow worthy of a trial by our farmers, and an instrument which will do great service in heavy clay lands, and such as have impervious sub-soils. We feel that we could not do justice to either of these plows, by giving them the whole premium. We therefore have awarded to B. F. Smith of Syracuse, (Ruggles & Co., Mass.,) $12, considering his plow superior in workmanship, and that it will do the best work in lighter clay soils. We award to S. McLean of Royalton, Niagara county, $8 for his sub-soil plow, the construction of which is very simple, is so cheap as to be within the reach of every farmer, and will work its way through the heaviest soils.

In closing their report, your committee would beg leave to suggest that a suitable premium be offered for the best dynamometer. The instruments now in use are very imperfect, and no certain test of the power required in the draft of a plow. Such is the continually varying resistance given by the inequality of the earth's surface, and the obstacles under it, that the index of the dynamometer revolves as rapidly as a weathercock in a storm. We want an instrument not so easily affected, or farther removed from continual fluctuations, which will note in single pounds the average power required in a given number of feet. Yankee ingenuity has evidently not been sufficiently employed in the construction of this instrument; and we are persuaded it needs but little encouragement from your Society, to stimulate it to the production of an instrument which will render the power required in the draft of a plow as easily determined as the power of a locomotive.

All of which is respectfully submitted by your humble servants,

Myron Adams,
C. S. Button,
L. B. Langworthy,
R. Harmon, Jr.,
} *Committee.*

Rochester, Sept. 23, 1843.

NEW METHOD OF FILLING ICE HOUSES.

Messrs. Gaylord & Tucker—Croton water and pure ice is all the go in the city of New-York, these temperance times, which induces me to recommend an easy and cheap method of manufacturing and filling a house with ice in a pure and solid state, in the best possible manner for preservation.

This house or cellar designed for ice, must stand near a conductor of water; and the top of the house should be so constructed that it may be moved at pleasure, that the inner part may be as much as possible exposed to the weather. Insert a pipe stem into the conductor, that the water may spin through it at an elevation of seventy-five or eighty degrees into the air, in a direction so that in its fall it may enter the space where it is to remain during the season. This water being cooled by rising in the air, the force of the stream is broken in its fall, and if the weather be sufficiently cold, it will immediately congeal into one solid mass of ice quite pure, and in the best possible position for preservation.

Weybridge, Vt., Sept. 29, 1843. **S. W. Jewett.**

GENESEE COUNTY AGRICULTURAL SOCIETY.

THE fourth anniversary was held on the 4th and 5th of October, and was better attended than any previous. The show of cattle was large and very good; the show of hogs superior in every respect to that of the State at Rochester. In sheep and horses we also had a very good show. In the domestic, we were largely in advance of any previous year, and had an exhibition that was really creditable even to old Genesee. The number of voluntary members was larger also than any year before. There is still room for improvement, and I think another year will demonstrate that the people are wide awake.

The plowing match excited, as usual, great interest, and went off very well indeed. An address was delivered by the president, the ability of which you can judge when you read it. It would not be proper for me to speak of it, as I might not do it justice, seeing that I am its author. The Society very kindly tendered me the office of president again, but having been so for four years, I thought the rule of "rotation in office" should be applied. Edgar C. Dibble of Batavia was elected president, J. A. Verplank of Batavia secretary, and F. P. Pendell of the same place treasurer. Eight vice presidents and four managers in each town were also elected.

The society is in a highly prosperous condition, considering the disadvantages under which it has had to labor.

The competition on grain and root crops does not take place until 1st November, at which time the premiums are paid off.

The great good growing out of these agricultural societies begins now to be very manifest, in the increased attention paid by farmers to all branches of their business, and the competition among them apparent at the annual exhibitions. Every farmer feels that he is materially benefitted by the opportunity thus afforded for comparing the various breeds and crosses of animals, and judging from actual observation of their value to him. Hundreds of dollars are therefore saved, that otherwise would have been lost in experiments. The same also holds good in relation to farm implements, as none will be brought forward that have not been fully tested by actual use.

Holding the State Fair at Rochester this year has been of great service to the cause throughout the west part of the state. Although the Rochester people did very well, still I must be permitted to say that if it had been at Buffalo, there would have been a much more liberal spirit manifested among all concerned than I saw at Rochester. I only hope that one Fair may be held there, to show the different spirit prevailing in the two cities. Hereafter, wherever it is held, the city or village should be at the entire expense of the yard and fixtures. They can well afford it, and that would be but a small return for the amount of money left with them on such occasions. Sincerely yours, T. C. PETERS.

Darien, Oct. 16, 1843.

RAISING TURKIES.

"A SUBSCRIBER" inquires if turkies "can be made to lay when they show a disposition to set, by being confined as hens sometimes are." The editors of the Cultivator ask that some correspondent "acquainted with the habits of this fine domestic bird, will reply to this query." It is assuming much to claim an *acquaintance* with the *habits* of the turkey, and yet perhaps I can give your correspondent some light; and as I shall charge nothing for it, it may be accepted if nothing more satisfactory should come to hand. I must remark, however, in the first place, that your correspondent's turkies are certainly very different from the generality of turkies in this vicinity, if they "*never* lay eggs enough to set them with." Mine seldom lay less than twenty eggs before they show a disposition to set, and they not unfrequently lay twenty-five or thirty; but as I set the first eggs under hens, I sometimes fall short before I have set all my turkies. In Connecticut, after a turkey has completed her first laying, by confining her a few days, she will usually lose her propensity to set, and in the course of two weeks commence laying again. There is occasionally an exception to this rule. I have had one case this season, where every effort to destroy a disposition to set was unsuccessful; but it was after the hen had hatched out her brood, and I had taken them from her. She refused to leave her nest, and when shut from it, would set wherever she could find an egg, and for aught I know, she is setting now; for after being driven from "pillar to post" for some 8 or 10 weeks, she took to the fields, and for some weeks past I have lost sight of her. But I intend, another year, to turn this untiring and stubborn "*habit*" to some account, rather than attempt to destroy it.

A few words to those who wish to succeed in raising turkies. See that the young ones you intend to keep over are thoroughly *domesticated*. Learn them to eat out of your hand, to fly upon your shoulders, and feel no alarm when you handle them. You will then have turkies that will lay in your barn or near your house, instead of wandering off into the fields or woods. But I contemplate some more extended remarks upon this subject at a future time, if I can persuade myself that by doing so I can contribute to the better success of your readers in raising turkies. I will only say now, to those who desire success in this business, beware of breeding "in-and-in." It will ruin any flock of turkies in the course of three or four years. It is possible your Virginia subscriber may trace some of his difficulties to this source. K. L.

BUCKWHEAT—BERKSHIRE HOGS, &c.

MESSRS. GAYLORD & TUCKER—The object of this communication is to obtain from yourselves or some of your numerous correspondents, some information in relation to the cultivation of buckwheat. This is a new article of culture in our state, and so far as I can learn, is not planted by a dozen farmers among us. On the 4th day of July, the present year, I sowed upon one acre of land, (from which a poor crop of wheat had just been removed,) a bushel of buckwheat. The soil was very light, and did not produce much more than five bushels of wheat to the acre. Notwithstanding, the buckwheat came up well, and while in blossom looked very promising. I observed, however, that it commenced ripening its seed very early and very irregularly; all the lower seeds maturing while the top continued in flower. Whether this is characteristic of the plant or not, I do not know, as I have never before planted it. Being fearful of its shelling out and getting lost, I felt disposed to cut it some time since, but one of my negroes who is from Virginia, said he was acquainted with the article, and that it would not shell out, as it held the seed very tenaciously, and was even difficult to thresh out.

In consequence I suffered it to remain, and two days ago, cut, threshed and fanned it, when it yielded only two bushels and a half, although I was careful to have it cradled while the dew was on it in the morning, and did not remove it until sunset. Upon examination I found that it had been lost in the harvesting, the seed being thickly scattered over the ground from which it was taken. Please give an article upon the subject in the Cultivator.* That my wheat was sown upon such poor land, I would be ashamed to acknowledge, but it was done by the former occupant of the farm, which has just come into my possession. Should my life be spared, I hope by the instructions contained in your own, and our useful agricultural journals, that this state of things will not continue long.

The dawn of a better system of agriculture has made its appearance in our state, and the *imperious necessity* of collecting more manure than heretofore, is impressing itself upon most of our planters and farmers. But while the culture of cotton continues to occupy so undue a proportion of time and labor, very little improvement can be expected. More attention, however, is now being paid to the rearing of stock, which is the first step towards a better system. We have the Durham, Devon and Ayrshire cattle; the Bakewell, Leicester and South Down sheep, and the Berkshire hog, with other varieties, and I hope they will prove highly useful in improving our native stock. At any rate, being expensive animals, more care will be taken of them, and thus better management of stock in general, will gradually take place.

The Berkshire hog is most assuredly the best formed, and probably in all respects the most profitable animal of his kind; but they have in every instance that I have known of, failed to attain the weights anticipated. We want a hog which at a *year old*, will weigh on reasonable keeping, 180 to 200 lbs. *nett*, and in no case have I known one *here* reach those weights. Now this is very much below what many of your correspondents mention in the Cultivator. The animals that I have seen, were mostly obtained from Messrs. Bement and Lossing, of your city, and I now have some of the stock of the former, but they are small, although they have been kept fat from their birth. We cannot afford to keep our hogs on milk, and therefore do not expect them to attain the enormous weights spoken of in the Cultivator, but we could wish a heavier animal than we find the Berkshire, when kept upon the ordinary food that we can spare them. Hoping I may be able to serve you by extending your subscription list, I remain yours, J. W. G.

Greenville District, S. C., Sept. 28, 1843.

THE FARMER'S ENCYCLOPEDIA.

MESSRS. EDITORS—We regret to find that an article upon the *Influence of Climate on the Productiveness of Plants,* introduced into the Farmer's Encyclopedia, has caused us to be denounced as entertaining feelings unfriendly to the interests of the Southern states. Very erroneous impressions have been propagated in regard to us by means of extracts and garbled statements made by those who have never seen our work, in which it is explicitly stated from whence the article was taken. Where we are personally known, we entertain no fear of being in the least suspected by Southern men of any desire to do the South the least injustice. To show, however, what little foundation really exists for accusations against us, we think it proper to state that the article which has been complained of was written several years since, and originally published in the American Journal of Geology, by a *Southern man,* born and educated in South Carolina, and largely interested in Alabama and Mississippi property, in both which states he has spent much of his life.

The position sought to be maintained by this able and unprejudiced inquirer, is, that "the cultivated plants yield the greatest products near the northernmost limit in which they will grow." He has certainly argued the point with great ingenuity and plausibility, but whether his data are all invariably correct, we will not take upon ourselves to assert, not wishing, at present, to argue the subject. The author is abundantly capable of taking care of himself, should he feel called upon to do so. But we do not think it likely that he will condescend to notice all the communications which have been, or may be made upon the subject through different journals, some of which are from persons possessed of marvelous faculties for discovering treason where this or any other offence was never dreamed of. The question affords an interesting topic for discussion in journals devoted to Agriculture and natural science.

EDITOR OF THE FARMER'S ENCYCLOPEDIA.

Philadelphia, Oct. 16, 1843.

BOMMER'S MANURE METHOD PUT IN PRACTICE.

MESSRS. GAYLORD & TUCKER—Being a subscriber and constant reader of your valuable agricultural publication, I frequently find there, articles on "Bommer's Method of making Manure." As these articles are chiefly from the pens of agriculturists who have followed this method with entire success, it affords me unfeigned pleasure to be able, on my own behalf, also to bear testimony to the value of this method, and through the medium of your paper, to make the results of my experiments and operations known to my fellow citizens. This I do, both for the sake of bringing before the public the great advantages derived from using the method spoken of, and the benefits insured me by its application, and at the same time in order to render a deserved tribute to the truth.

On purchasing Bommer's method last spring, I immediately prepared a heap in the presence of a few neighbors. I followed strictly the directions laid down in Bommer's book. After the lapse of a fortnight, the heap was opened in the presence of a number of farmers, and our astonishment cannot be conceived on seeing the metamorphosis which had taken place, as we found all those weedy and stramineous materials of which the heap had been constructed, reduced to rich black manure, having an ammoniac smell, much more pungent than the best stable manure. Beholding so surprising a result, the farmers present formed themselves into a public meeting, and in that capacity nominated a committee from their midst, who were charged with the preparation of a Report of what we had seen, to be sent to the agricultural press.

I plowed in this manure into one-half of a field intended for potatoes, and in order to institute a comparison of effects, I put the same quantity of my best stable manure into the other half of the field. The effect on the soil was very nearly the same with both these kinds of manure; but the vegetation on that part of the field which had been furnished with Bommer's manure, was more luxurious and the foliage of a deeper verdure, which I attribute to the richness of the saline matter which it contains, and which alone preserved the humidity of the soil during the severe drouth of this last season. It is proper to remark also, that in the composition of the "Bommer Manure," I employed simply such doses of the ingredients as were absolutely necessary to insure success in the operation of making it, and if I had increased these quantities, there is not the least doubt that the result of the Bommer manure would have been very far superior to that of any horse manure.

Perfectly satisfied with my experiment and its results, I have put up fixtures near my barnyard for the purpose of preparing large quantities of this manure; and within the last two months I have made three heaps, which have yielded me between 200 and 300 loads of excellent manure. The last heap was composed entirely of 100 loads of sedge grass, nearly dry, with which I intermixed 40 loads of swampy matter, such as exists on my farm. All my outlay in purchasing ingredients to form the lye for this last heap, amounted to between $20 and $30, and in disbursing this trifling sum, I have made a heap of manure, which I would not dispose of for $250.

I shall prepare other heaps of manure before the winter sets in, and those who may be desirous to see me at work and to assure themselves of the truth of what I have said, need only call at my farm, and judge for themselves.

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* Buckwheat at the north, is grown on dry soils, and usually on those that are so reduced as to be unfit for other crops. On very rich soils, the growth is too luxuriant and does not fill well. It may be sown from the 20th of June to the middle of July; and some years the earliest sown will be the best, in other years the latest sown will be the most productive. No crop appears to fluctuate more with the season, or be more depending on the weather. Hot and very dry weather, about the time of flowering, we have found most injurious. In ordinary seasons it continues to blossom until frost comes, and ripe seeds, green ones, and flowers, may generally be found on the same stem. No crop requires more care in gathering, to prevent loss from the shaking off of the seeds. The time of cutting should be, when the stalk exhibits a good proportion of ripe seeds. To wait for all, would be the certain loss of the earliest seeds, which are the most valuable. Buckwheat should be cut when damp with dew or rain. It may then be set up in small bunches, such as would make an ordinary sheaf of wheat, and the top slightly pressed and bound together. These are allowed to stand singly, until thoroughly cured and dried, when they should be carefully carted, and threshed at once. There is no crop threshed so easily as buckwheat, when in good condition; and the grain has one advantage over most others, in rarely suffering any damage, no matter how much exposed to storms. The product varies much per acre. The average may be from 15 to 25, but the yield sometimes reaches 35 or 40 bushels per acre.

One word as to the Berkshires alluded to by our correspondent. While we have no difficulty in making them reach the weight required by him at the age mentioned, many of our farmers who prefer heavier porkers, have crossed the Berkshires with some of the larger breeds, the Leicester or Hampshire, for instance, and think that so far as size is concerned, they have made a decided improvement. Another thing: if our correspondent will look at the analysis of corn as made by Dr. Dana, he will find that while its fattening properties are unrivaled, its power for forming muscle, or in other words, for promoting growth, are not equal to many other articles of food. At the north, we find it best to give the growth by these cheaper materials, while the corn is reserved for the fattening.

The benefits which I derive from using this method are not inconsiderable. Before becoming acquainted with it, I purchased every year from three to five hundred dollars worth of manure, which I needed over and above that of my own farm yard, for the 200 acres which I have. Now I do not purchase one penny's worth, and I can make double the quantity if I choose. I have the advantage of producing my manure in the sowing and planting season. I can make it more or less strong, more or less fermented, so as to suit the soil and the kind of crop for which I want it; I spread and plow it in while it is perfectly fresh, and consequently in all its strength. These are some of the results experienced by me in using Bommer's method of manuring land.

GERRIT KOUWENHOVEN.

Flatlands, L. I., Sept. 15, 1843.

"ECONOMY OF FARMING."

MESSRS. EDITORS—I have been reading with some pleasure, a pamphlet lately translated from the German, by Mr. Smith, with the above title. It is a valuable work, but I for one wish the translator had used a little more economy and simplicity in the construction of his sentences.

Let me point out to you an example or two of these faulty sentences. Take proposition No. 31, under the head of "How much manure is needed to retain a given amount of fields in a fertile state;" which reads thus—"That any farm may be maintained in the same capacity of production, as much manure is required as it would receive, if all the straw of the grass kind of grain plants, all the fodder which has grown on the field, and for the products taken away for the production of manure, as much in hay and litter were restored, *as the increase of weight is less than that which the plants restored have gained in organic matter.*"

Again, under the same head, proposition 36. "The substance of manure will draw from the soil, through all plants, in an inverse ratio, compounded of the absolute quantity of their similarly formed product, and their relative power to assimilate organic matter."

What think you of No. 36, friend Solon Robinson, of Lake Court House? When upon one of your night trips to mill, please dream upon it, and give us the meaning of it in language which we of the plow can comprehend.

If, in the original, Prof. Burger has laid down his propositions in language as obscure as this, his writings should be accompanied with a commentary, for the benefit of the plain farmer; if, on the contrary, this want of clearness arises from the translator not being familiar with the subject, he would do well to obtain some gentleman having a clear and methodical mind, to simplify the propositions for him.

The book is a valuable addition to our farming library; but gentlemen who write for the many, should remember that the utilitarian reader who is searching after truth, prefers it dressed in its simplest attire.

A SUBSCRIBER.

BROAD TAIL SHEEP.

MESSRS. GAYLORD & TUCKER—The Sept. no. of the Cultivator contains an interesting reference to early American agricultural works, in which no more than justice is done to Judge Peters, the author, as I have heard it said, of the system of building covers over bridges. Judge Peters was not esteemed by any means a good *practical farmer;* yet, what is much more important than the *working example* of any individual, he roused a spirit of inquiry—he put the ball of agricultural *thought* in *motion.* And if he did not illustrate many important discoveries or improvements in his own practice, he was nevertheless the cause of great advances being made by others.

In the south, the planting states, the earliest and the most powerful impetus was given to agricultural improvements by Col. Taylor, by his essays, originally published in a Georgetown, D. C. paper, under the signature of *Arator.* These papers were on topics of every day's concern, and attracted earnest and general attention. The style was exceedingly involved and obscure, but the matter was original and sound; but a *good translation* would have rendered them more useful and popular, since it would have brought them within the ready comprehension of the least intelligent reader.

It is stated in the Cultivator to which I have referred, "Public opinion did not, however, second Judge Peters, and the Tunisian sheep are now almost or quite unknown in this country." It is this observation which prompted me to take my pen. That the Tunisian, mountain, broad tailed sheep, as they were carefully designated by Judge Peters, should be nearly unknown, is not to be wondered at by those who are aware of the remarkable fact that they have not been known to copulate in this country. Any one who will examine in the Memoirs of the Pennsylvania Agricultural Society, the engraved plate of the under surface of the tail of that breed of sheep, will at once see the extreme difficulty, not to say physical impossibility of access—the male to the female; and extraordinary and unnatural as it may appear, the fact is nevertheless true, that coition, unassisted, has never been effected, as far at least as I have observed or been able to learn. Two pair at least have been brought to me at different times, by different officers of the navy; yet they did not breed, and all attempts by the process generally but not universally deemed indispensable to the production of a fœtus, failed from the extreme breadth and immobility of the tail. The rams were ardent, and the ewes "nothing loth;" but a breadth has been given by breeding, as I am persuaded, through many generations, with exclusive reference to the tail, that nature has at last said, here your experiments shall stop. Mr. Jefferson, to whom this breed of sheep was sent or given by Judge Peters, I forget which, said that he could never succeed in breeding them on the common sheep of the country higher than seven-eighths degrees of the blood of the imported stock; that in that degree, at the highest, the breadth of the tail presented an insuperable barrier. Nothing more natural than to inquire, in such case, how is it that the breed is kept up in Tunis? for in these matters nature is the universal instructor, and rarely calls on art for a helping hand. I took some pains to inquire, and among others through my late and lamented friend Commodore Porter, a man of genius and of a most inquisitive turn of mind; and he told me that in Tunis, where he had been invited by the Bey to look at large flocks, the *hand of the shepherd was employed to consummate the work.* But as in this country I am not aware that recourse has been had to the same kind expedient, it is obvious that the individuals imported must soon die off and become "almost or quite unknown." But on the subject of the effect of a cross, I have this to say: I was once taken by Col. Powell through the Philadelphia market, and conversed with all the principal *sheep butchers,* and their experience was altogether in favor of a smart dash of the broad tail blood; and they all agreed that since it had run out, they had not had such *early and fat lambs* in their market. The fault of the breed was that it was extremely light in the fore quarter; but for mutton, the beautiful point of which, in a saddle, is a broad and flat tail, and for fatness of lamb in the same region, I am persuaded there was eminent merit in the broad tail breed, and that where there is, as there may be in many cases of which we are not aware, any remains of that blood, it contributes to the value of the saddle or the quarter of either mutton or lamb. Had we the blood at our command, to be infused in such degree as might be thought proper, it is probable that judges and epicures would throw a quarter of it into all sheep intended for our own table.

J. S. SKINNER.

Washington, Sept. 30, 1843.

INDIAN CORN—CLOSE PLANTING.

MESSRS. EDITORS—I wish to state to Mr. Physick two or three facts. In objecting to close planting the larger kinds of corn, (see Jan. no. of the Cult.) I did so from the past year's experience. I had an acre of ground, of medium fertility, planted and managed throughout according to his directions. From one-third of the piece the blackbirds pulled about two-thirds of it, and here I had a good yield of corn. The balance was nothing but nubbins, and but few of them. During the present season, I have seen another piece of corn spoiled by close planting. I have observed, however, that land in a high state of fertility, will bear much closer planting than that which is less fertile, and perhaps land may be so highly manured as to do well, planted as close as Mr. P. recommends. I do not doubt his statements respecting his crops, but do not think close planting will answer as a general rule.

Another fact. In 1832, I occupied a garden on the banks of the Hudson, in which were several peach trees, and in that summer several of them died with the yellows. One of the trees that died stood beside the house, at least 20 feet from where the earth was ever cultivated. Where I now live, the yellows is unknown, yet every garden is filled with peach trees, and under most of mine the ground is annually spaded quite up to the trunks. A few trees standing in a grass plat, of the same age with those in the cultivated part, are not half as thrifty and do not bear as well as those whose roots are annually mutilated. Consequently, I cannot think the disease is produced by mutilating the roots. I believe the disease is never known in new countries, till at least one generation of peach trees has passed away.

P.

Bowling Green, Wood co., O., Sept. 1843.

COMPARATIVE EXPENSE AND VALUE OF THE WHEAT AND CORN CROP.

MESSRS. EDITORS—The questions are sometimes asked—Which is the most profitable for the farmer, the wheat or the corn crop? What is the comparative expense of each? And how much land of medium quality can the labor of one man cultivate in a season, of these crops? The object of this paper will be to furnish an approximation to an answer to these queries; I say an *approximation,* for such is the manner in which we farmers manage our affairs generally; so little attention do we pay to accuracy of detail, and careful note of expenses and labor, that after all, much must be considered as little better than guess work in the best of our estimates. Besides, two farms can scarcely be found, where, owing to facilities arising from location, buildings, and above all, the quality of the soil, there will not be less labor required to produce a given crop on one, than on the other. In the estimates below, I have given the items of expense as they have occurred on a farm of rather stiff loam, in tolerable condition, and affording fair average crops. Labor I have placed as I have paid for it, an average of fifty cents per day, with the exception of harvest, which with me costs a dollar per day. A day with a team, I have counted the same as a man. As to the crops, I have taken 30 acres of wheat and 20 acres of corn, as the base of my calculation; it being by many supposed that the amount of land stated in either crop, is what the labor of one man and team can cultivate. It is known that *one* man cannot perform *all* the work on either of these crops, but can he do as many day's works as either of these crops require? If he can, then by exchanges and good management, he may be said to cultivate the given number of acres.

Wheat—30 acres.

	Expen.	Day's w'k.
1st plowing. Green sward, 1 span horses, 1 acre per day,	$30·00	30
2d plowing. Green sward, 1 span horses, 1½ acre per day,	20·00	20
3d plowing. Green sward, 1 span horses, 2 acres per day,	15·00	15
Harrowing 3 times, once after sowing, 5 acres per day,	18 00	18
Seed 45 bushels, or 1½ bushels per acre, $1·24 per bushel,	55·25	
Sowing six days,	3·00	6
Harvesting, $1·50 per acre,	45·00	45
Threshing and marketing 600 bushels, at 10 cents per bushel,	60·00	60
Interest on 30 acres, at $30 per acre, for 1 year and 6 months,	95·50	
	$342·75	194
Deduct value of straw, at $1 per acre,	30·00	
Total cost,	$312·75	
Crop, 20 bushels per acre, 600 bush. value,	600·00	
Nett profits on 30 acres,	$287·25	

Thus the profit per acre, of the wheat crop, is $9,57; and the number of days work per acre, 6½ nearly.

Corn—20 acres. Green sward, manured before plowing.

	Expen.	Day's w'k.
Manure, 20 loads per acre; 10 before and 10 after plowing, 25 cents per load,	$100·00	
Hauling and spreading, 2 days per acre,	20·00	40
1 plowing, 1 acre per day,	20·00	20
Rolling, 3 days,	3·00	3
Harrowing, 4 days,	4·00	4
Planting, 20 days,	10·00	20
Seed, 10 bushels,	7·50	
Hoeing twice, three-fourths of an acre per day,	28·00	56
Harvesting, half an acre per day,	20·00	40
Threshing and marketing 1200 bushels, at 10 cents,	120·00	60
Interest for one year,	42·00	
	$374·50	243
Deduct half the cost of manure, as for next crop, $50 Cornstalks per acre for fodder, $2.50 50	100·00	
Total cost,	$274·50	
Crop, 60 bushels per acre, 1200 bush. value,	600·00	
Nett profits on 20 acres of corn,	$325·50	

Thus the profit per acre of the corn crop, is $16.27, and the number of day's work per acre, 12 nearly. It may be said the time spent in threshing and marketing, ought not to be taken into the account, when it is desirable to ascertain the labor of cultivation alone. This is true, and if we exclude this time in both cases, we find that it requires 134 days for the wheat crop, or 4½ per acre, nearly. For the corn, it would give 183 days, or 9 day's work per acre nearly. At these rates, one man could cultivate about 35 acres of wheat, and would fall a little short of 20 acres of corn in a season of six months. In forming an estimate of the cost and value of these crops, however, one thing must not be forgotten, and that is, that two crops of corn require only the same time as one crop of wheat, and consequently the profits or the loss must be in the same proportion. The amount of the crop of wheat and corn stated, is about the average yield for a number of years on what may be called well cultivated land, as the phrase goes.

A FARMER.

HABITS OF BEES.

ALTHOUGH much has been said and written on the economy of bees, there are still many things pertaining to them not well understood; and it is only by preserving facts, as they are from time to time brought to light, that we may at last be able fully to understand their habits, and to pursue the best mode of management.

Some correspondent of the Cultivator denies the existence of the *queen* bee, as it is called. It seems to me this man's opportunities for observation cannot have been very extensive, or he would not have made such a denial. The existence of such a bee is not a matter of doubt; the most ample evidence can be had on this point. As to the office, or *all the offices* of this bee, we cannot perhaps speak so positively; but it is well known that no swarm will do well for any length of time without it; and it is in my opinion equally certain that such a bee is the *mother* of the colony. There are some who believe in the existence of a reigning or governing bee, but who denominate it a "*king.*" Such people generally consider the "*king bee*" a male, and suppose the drones are females. I have often examined the drone bees at various seasons of the year, by opening their abdomens, but could never find any appearance of eggs in them. But eggs have been found in what is called the queen bee.

James Rightmire of Knox county in this state, a man of German descent, an old bee hunter, and a close observer, (though of limited opportunities for reading,) states that he has several times found eggs in queen bees that had been killed or injured by accident. He also relates some facts which go to settle the question whether it is the old queen or a young one which leaves the hive when a new swarm comes out. Some expert bee keepers are in the practice of closely watching a hive when it is about swarming, and by securing the queen of the new colony, when she makes her appearance, and cropping one of her wings, so that she cannot fly, prevent the swarm from going off to the woods, for the bees will not leave their queen. Mr. Rightmire states that several years since, he caught a queen bee at the time a swarm was coming out of a hive, and cropped her wings. He put her into a new hive, and the swarm soon followed her. He kept this bee for *five years*, during which time she came out with seven or eight new swarms, *always coming out whenever the hive she was in swarmed.* This bee was at last killed by accident. She came out with a swarm, and being unable to fly, fell on the ground. Mr. R. noticed the confusion of the bees, and went to search for the queen; but she, lying on the grass, could not be readily seen, and he inadvertently crushed her with his foot. *She was full of eggs*, and but for her *tragical* end, might have lived to propagate her species for five years longer.

Sometimes there are several queens come out with a swarm. In this case, the swarm is either sub-divided, each queen taking a portion, or as is more frequently the case, battles ensue between the queens, and the right to wield the sceptre of government is decided by mortal combat, the contest continuing until only one remains alive. Mr. Rightmire says he has often witnessed these conflicts, and in one instance knew *four* queens to be killed in a single hive, before peace was secured. During these battles, the bees seemed in the greatest commotion, doing nothing but running about in the most agitated manner. SANFORD HOWARD.

Zanesville, O., Sept. 1843.

QUEENS CO. AG. FAIR.

MESSRS. GAYLORD & TUCKER—The Queens County Agricultural Society held their Fair, Cattle Show, etc., for the present year, at Hempstead, on the 17th inst., where every thing passed off with much harmony, and the best spirit prevailed among all who assembled to witness the proceedings and riches of the country. There was evidently a decided increasing zeal in the great cause, exhibited upon the happy countenances of the thousands assembled, (thousands I may safely say,) for never before was there such a "gathering together" of the people in Queens co.

The annual address delivered by the Hon. Lt. Gov. DICKINSON, was worthy of all praise. He spoke not of agriculture superficially, as is usual upon such occasions, but as the primary first step in the civilization of man—its pursuits of the most high and noble order—where toil was honorable, and labor successful.

There was about $350 awarded in premiums richly merited. The day was closed by a sumptuous dinner, prepared by Mr. Anderson, when JOHN A. KING, Esq., in his usual happy manner, welcomed the Lt. Governor to Queens co., and proposed his "future health and happiness." Lt. Gov. D. responded in a very neat, pertinent and appropriate manner, reciprocating the sentiment. I trust to see at an early day, the address published in your highly valued paper, as all should read it.

Oyster Bay, Queens co., Oct. 20, 1843. S. Y

The Garden and the Orchard.

GOOD FRUIT.

THAT it is just as easy to have good fruit as poor, is a truth that every farmer should remember; and this, if acted upon, will be found not only easy but profitable. If the fruit orchard is deficient in numbers or varieties, lose no time in correcting the evil; and the best way is to apply to some experienced nurseryman for the kinds and qualities most desired. We know that formerly disappointments sometimes arose from orders being filled with trees different from those ordered, or of inferior varieties, but no professed dealer in trees will now hazard his reputation by such acts. Public opinion has corrected the evil. If the number of your trees is deficient, but the quality inferior, take note now of the trees you wish grafted or inoculated, as the fruit is before you and its qualities easily tested. Then during the winter collect such grafts and make such preparations as shall obviate all objections to fruit hereafter. A few good fruit trees of each desired variety is far better than great numbers with inferior fruit. A *succession* of good fruits is indispensable. The varieties of summer, autumn and winter should follow so as to leave no interval. Enlarge your list of different kinds of fruit, rather than your varieties of the same. Cultivate all of which your soil and location will admit, and you will find your labors amply repaid in the pleasure and profit you will receive.

CULTURE OF THE PEACH.

MESSRS. EDITORS—I presume you will have many commentaries on Mr. Physick's statement and theory about peach trees, in your last number; if so, you will publish whatever you think most useful on the subject. As to the disease called the Yellows being contagious, I have always supposed it was; but have tried no other experiment except the common one of observing that when one tree was infected, other trees standing near would be, unless the infected tree was immediately removed; in which case the healthy trees would generally be preserved. And I cannot understand Mr. Physick as giving any facts to prove the contrary, but only to prove the disease not incurable. Having some years ago removed all my trees affected with the yellows, I have not since been troubled with that complaint.

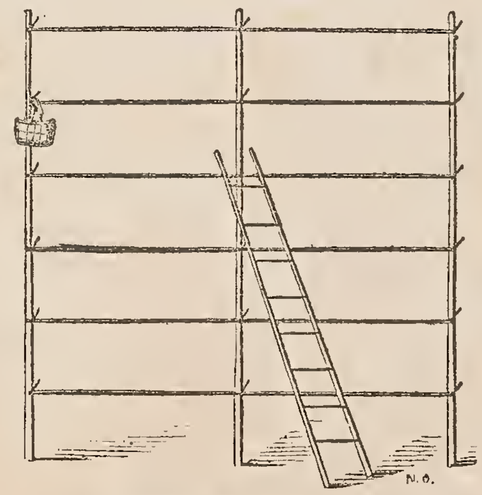
As to peach or other fruit trees being injured by plowing and cultivating the ground where they grow, in our soil and climate, I think facts do not prove it at all. I was always fond of fruit of almost every kind, and peaches were my particular favorites. I came into this part of the country to reside, early in 1801, and have resided here ever since. When I first came here, peaches were very plenty. They were not raised for market, but for the family to eat, preserve, and give to the neighbors and friends, and were almost as sure a crop as potatoes. This continued to be the case till 1810. In December, 1809, there was a very extensive and severe cold freezing turn, which killed nearly all the peaches in this vicinity, and as far west as to Lake Erie. Since then, for some cause to me unknown, it has been much more difficult to grow peaches in this part of the country; but no more difficult on plowed land than on sward. I have ever since tried to grow my favorite fruit, but with very ill success. Sometimes I have had one or two trees that would bear a few peaches for a few years, and then die. And for the last ten or twelve years I have not grown a ripe peach, although I had more or less young trees all that time; nor do I think there has been ten bushels of ripe peaches grown in any one year, within six miles of here, during that period; when forty years ago they could be grown in plenty, without any special care or trouble.

I have never attempted to grow peaches in plowed ground, except in some parts of my garden, which I thought succeeded better than sward. I have now several young peach trees, some one, and some two years old, but hardly hope for any fruit from them. It may be said that I have not been thorough enough in taking care of my trees. I have tried all the remedies prescribed, and have succeeded in raising other fruit in plenty. If Mr. Physick, or any one else, can inform me how peaches can be grown hereabouts without very great trouble, old as I am, I will try again. C. BUTLER.

Plymouth, Ct., Sept. 1, 1843.

HINTS IN REGARD TO THE GARDEN.

MESSRS. EDITORS—I have been a practical gardener, and if in my practice I have observed any thing which may be deemed beneficial to my contemporaries, you may be assured it will give me peculiar pleasure to advance any thing original. None, I presume, are more fond of originality than I am, where it is likely to give pleasure or profit to myself or others; having been benefited in practice by the suggestions and drawings on various subjects given by your able and obliging correspondents, I regret that it is not in my power to offer something of more importance than fortune at present has favored me with.



Grape Frame.—(Fig. 94).

I will give you a description of a grape vine frame, which is original and my own, so far as my observation has extended. However trifling it may appear, I like it for its economy and simplicity; and when the vast extent of country which is in these United States, is considered, if this frame were made a substitute where all nailed fabrics are used, (even where my observation alone has extended,) how many pounds of nails, and how many dollars and cents might be saved, I will not pretend to calculate. The posts of this frame may be from 10 to 12 feet in height above ground, (fig. 94,) set firmly in the ground, 2½ or 3 feet. Posts measuring 5 or 6 inches at bottom, will be stiff enough. Chestnut saplings answer well. They may be 6 feet or more apart; pins 2 feet apart are drove through the posts in 1½ inch holes, at an angle of 22½° or one-eighth of a circle or more, at the point of juncture of the pin with the post. Length of pins, 6 inches clear of post. Lath or poles are laid on the pins. Such a frame I have in the center of a garden; beneath is a vacant ground plot, which I have had covered with tan, around which is spherical and right lined grass edgings and flower beds. The advantages of this frame are these:—1st. The posts being near together, they will bear a ladder against them for the purpose of gathering fruit. 2d. The pins will answer to hang your basket or other necessaries about the garden on. 3d. The fowls will not trouble themselves to fly so high as to take the grapes in a paled enclosure. (They are very troublesome in a post fenced yard of grapes, devouring them nearly all.) 4th. Persons of common sense, little skilled in mechanism, may make this fence as I have done. 5th. The grapes will do as well 12 feet from the ground as 6, thereby saving half the ground. 6th, and lastly, it takes no nails, and requires no mortice. Persons who are desirous to have a more ornamental frame, essentially on the same principle, may have the posts turned with nobs on, and set as tennents in blocks in the ground, thereby saving them from rotting. The posts may be painted green or other colors; round pieces of lath or sawed strips may be let through the center of the posts, equi-distant as before.

A CHEAP BOWER.

Persons who will take the pains to plant the jinne-creeper* in their garden, or other enclosure of ground, at particular points where they wish shade produced, may in process of time have a very fine thick commodious shade, and an efficient bower, simply by placing chestnut forks around the shrub at intervals, and placing poles on the forks athwart each other, for the branches to lay on. Such a one I have, which forms an impenetrable shade of some ten or twelve feet in circumference; beneath which, I drove pins in the ground, and nailed boards on the top, thus quick forming convenient benches on either side. It will be seen that this mode of constructing bowers leaves the freest possible circulation of air, are quick made, and economical in their construction. JOHN M. HARLAN.

E. F., Chester co., Pa., July, 1843.

PROTECTION FROM MOLES.

MESSRS. GAYLORD & TUCKER—Some five years ago, I had an old garden so much infested with moles that I was compelled to abandon it. I then built a new one. After selecting a proper site, I laid off 1¾ acres; dug a trench or foundation, 12 to 15 inches deep, entirely around it, and built a brick wall, one brick thick, best hard burnt brick, laid in strong lime mortar; at every 8 feet, a pillar 1½ brick thick; the main wall two feet high above the surface of the ground, and the pillars four feet on the top of the wall; between the pillars I laid cap, leveled or splaid brick, projecting one inch on each side of the wall to carry off the drip; wrought in the pillars two *heart* pine scantling, 2 inches square; left a hole in the center of the pillar 12 inches deep; dovetailed the end of a piece of scantling 3 inches square, into a heart pine cap 2 inches thick, to cover the pillar, projecting 1 inch all around the same. I then took heart pine paling, 1 inch thick, 4 inches wide, and sawed them through from corner to corner, putting the two broad ends down on the cap brick, so each 4 inches paling fenced 8 inches; the spike ends up; it makes a fence proof against all intruders, well dressed up and painted white. I consider it the most ornamental, durable, and best garden fence I ever saw. Well, stop; all this don't keep out the moles, for they will dive down even 4 or 6 feet, and go under the wall and into the garden; but here comes the secret. I dug down 6 inches below the surface on the *outside* of the wall, and laid a detached course of brick end ways butting up against the wall, entirely around the garden. Now the moles always *rooting* near the surface, will come to the wall and dive down to the brick shelf, (which is to be well covered up,) and I have no hesitation in saying will not in 50 years, turn back 8 inches and take the second dive. There has never been the track of one made in my garden since its construction. I pursue the same plan in regard to all out-buildings which I desire to make rat proof; especially the smoke house, which can be done even if the same is a frame house or logs, only underpin with brick or stone, and nail around the outside on the weather boarding, a strip of tin 4 inches wide, or a slanting piece of board.

PROTECTION FROM BUGS.

I commenced this spring as usual, in planting early cucumbers, squashes, melons, &c., which were no sooner out of the ground, than the greatest pest we have, the yellow bugs, devoured them. After trying two or three times, I made 30 or 40 boxes, 10 by 12 inches in the clear, of three-fourths chestnut boards, 6 inches wide; covered the tops with coarse millinett, nailed on with cut tacks; made the hills level with the surface of the ground, and laid on the boxes; as the vines rise, hill them up and lay them over again, till they are nearly ready to run. One crop has already more than doubly paid me. I shall make 70 more, which is as many as I want—will last many years with care. Ten days is long enough to keep them over one set of hills, and they will not cost over 3 or 4 cents per box. I have a great many other little matters to mention, which must be deferred till another time. A. B. N.

Three Otters, Bedford co., Va., 1843.

SHADE TREES.

MESSRS. GAYLORD & TUCKER—I picked up a scrap of newspaper the other day, containing an account of a great fire a few weeks since in Danvers, Mass., a few lines of which struck me very forcibly, and should be generally circulated. It stated many buildings were preserved by very great exertions, and many more by the shade trees surrounding the buildings. Thus an expenditure of perhaps two or three dollars, saved probably as many thousands; comment is needless. I have likewise made another accidental discovery: by setting out the roots of the Mountain ash, or in other words, cutting off the top of the tree near the ground, and setting out the stump, the shoots of which, in three years grew to the height of fifteen feet, and nearly three inches through. As it will soon be the proper time for setting out those beautiful trees, I hope to see some of your citizens in Albany, and the neighboring cities and villages, try the experiment; or if they choose, the whole tree, as nothing can exceed it in beauty for an ornamental tree. It will likewise be the proper season for transplanting any kind of forest or fruit trees, particularly the sugar maple, the pride of the American forest, or the world, so far as I have seen, for beauty and use. In setting out the maple, I invariably cut off nearly or quite all the top, and if the ground is not wet, am almost as sure to raise them as a hill of potatoes. C. K.

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* Query—Is the plant here designated, the Clematis Virginica which we believe is sometimes called the Virginia creeper?

HINTS ON ONIONS.

Messrs. Gaylord & Tucker—The preparation of the ground should not be stirred and made light for this vegetable, so deep as for others with tap roots. Two inches is deep enough to stir the ground, then lay strips of boards in a parallel direction, side by side on the ground, eight or ten inches wide, and leave a space between each board to sow the seed, of about three inches; let these boards remain on the ground until the onions are one-third grown, before they are removed. The advantage of the boards is obvious; it prevents the weeds from growing between the rows, and it aids in getting over the beds in weeding time without disturbing the plants, thus saving about one-half the labor, a necessary item.

To make early Onions.—When the common seed onions are the size of a goose quill or a little larger, pull out all thand too thick on the bed, and lay them by on the grass or ground to dry; all the natural juice that belongs to the top will enter the bottoms and aid in its growth, and in a couple of weeks form a perfect onion about the size of a robin's egg; when the tops are well dried, put them into a bag and keep them frost until the next spring, when they may be transplanted early in beds, for rare-ripes; these will mature early in spring or summer, for the table.

The bottoms of common seed onions, if preserved, will answer to transplant for several consecutive years, to raise seed from. They should be taken up each fall, and put them on to strings, and hang them in a cellar. There are many other curiosities and properties of the onion which your readers may be aware of, that I decline mentioning in this letter. S. W. Jewett.

Weybridge, Vt., Sept. 29, 1843.

GRAFTING.

The mode of grafting mentioned in the July no. of the Cultivator, is not a *new* one, and I will name some other methods of applying that principle in practice.

1st. Instead of inserting the scions in a shoot, and bending it down, we may uncover a root under any tree, insert the scion through it as directed for the shoot, and remove it in the same manner.

2d. Where a young tree bifurcates, so as to be in danger of splitting when the tree is loaded with fruit, a scion may be sharpened at both ends, and inserted one end in each branch, which will thus form a connecting limb, and thus effectually guard against the danger. To insert the scion properly, the branches should be spread apart so as to press firmly upon the shoulders of the scion, and if the tree has so much top as to be acted upon by winds, a string should be tied across above the scion, till adhesion has taken place. P.

Grafting Grape Vines.—In Hovey's Magazine, a simple mode of grafting grape vines is described, which in substance is as follows:—Cut off the vine below the surface of the earth; split the stock as in cleft grafting; let the scion be of one year's wood with two or three buds, make it wedge shaped, and insert it in the cleft; if the cleft does not hold it sufficiently firm, secure it by binding it tight; draw the earth over the whole, leaving the second bud from the top uncovered; take off all sprouts from stock and scion, except one, and train that as usual. We think those who have unproductive, or wild vines, would do well to try this method. The time is after the vines cease to bleed.

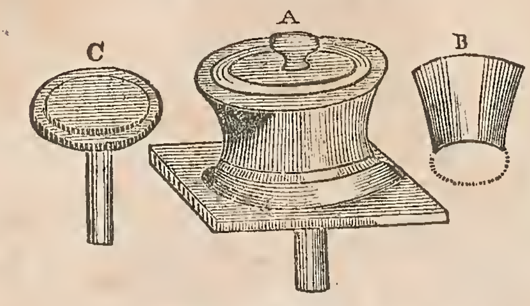
Worms on Cabbage.—These pests of the garden may be destroyed by taking off one of the large lower leaves of the cabbage, about sundown, and laying it on the top of the plant, "backside down." Take it off early in the morning, and the whole or a large part of the worms of that cabbage will be on it, and may be destroyed at pleasure. So says W. Chandler, in the Tenn. Agriculturist.

Wool.—A letter from the Register of the Treasury to a member of Congress from Vermont, gives the importations of wool for the first half of the present fiscal year, and admitting the last half to equal the first, the importation of wool for the present year, as compared with the last, will stand as follows:

Wool costing 7 cents or under,.....	1,762,736 lbs.
" over 7 cents,........	451,924
Total importation for 1843, ...	2,214,660 lbs.
Importations for 1842.	
Wool costing 8 cents or under, ...	10,538,988 lbs.
" over 8 cents, ...	751,384
Total importation for 1842,.......	11,290,382 lbs.
Deduct, ...	2,114,560
Diminution of importation in 1842,.	9,075,722 lbs.

Will not this extraordinary falling off in the importations account for the activity and better prices of the domestic wool market?—a result most satisfactory, as owing to the competition in manufacture, woolen cloths were never cheaper than at present.

Domestic Economy.



BUTTER STAMP.—(Fig. 95.)

Editors of the Cultivator—I lately met with a notice of a method of printing butter, in a little volume entitled "Frank," issued some time since, which if you have not already noticed, might be new as well as interesting to some of your numerous readers. It would seem that the principal advantages of this mode are, that the butter need not come in contact with the hand in any part of the process; and that the lumps when printed, will be of a uniform weight and size. In addition to these, not only the top but the sides may be printed of any pattern to please the fancy.

It consists of a small round box fastened to a board, through the bottom of which, is a hole for the introduction of a handle, connected with a second and moveable box inside the first. This second box is formed of three staves accurately fitted, so as to form a regular mold on the inside. These rest in a groove round the edge of a round piece of wood attached to the handle alluded to, and fitting loosely on the inside of the first box. This handle and top being first put down, the three staves are then placed with their ends in the groove, and the butter pressed down hard into the box. The print is then forced down on the top of the butter, which is afterwards to be pushed out by means of the handle below, when the staves may be taken apart.

The whole of this apparatus, with the exception of the stand, should be neatly turned from some hard and compact wood.

In the above drawing, A. represent the mold with the stamp on; B. one of the three moveable staves in the innerbox, and C. the bottom with the handle. J. C.

PRESERVATION OF APPLES.

In the London Gardener's Chronicle we find the following account of the mode of preserving apples adopted by a gentleman in Herefordshire. We are of the opinion it would succeed any where.

"He covers the floor of his cellar, with hurdles, two in thickness, and on these he puts a little straw, upon which the apples are placed without further care or attention, except removing all that appear to be faulty as he places them in the cellar; and he thinks it is unnecessary to use any particular care in this respect. He has at present, 110 bushels of apples thus heaped up in his small cellar; two or three times a week, he gives a good wetting with fresh water, as much as he thinks will *well wet the whole of them.* This water drains off through the straw and hurdles, into a well. In this way, his apples keep well until the time he usually disposes of them, the best to make him a good return after Christmas. At present the apples look as well and as firm as if just gathered, and I understand that during the last 10 years, they have always kept just as well and as *fresh*, as now. How much less troublesome and easy of application for keeping large quantities of fruit, than storing them away in dried sand, on shelves, or in boxes, or in many other ways highly recommended."

EGYPTIAN WHEAT.

The Caledonian Mercury gives one of the most striking proofs of the vitality of seeds, or the lengh of time their germinating properties, under favorable circumstances, may be retained. In unrolling a mummy in the Thebiad, the hieroglyphics on which proved it to be more than 3,000 years old, or in other words, that it was a cotemporary of the judges of Israel, or Samuel, a few grains of wheat were found in the envelop. On the first of November, last year, Mr. Ford, gardener to the Earl of Haddington, into whose hands a few of these seeds had fallen, sowed them in the garden. The produce was about 100 stalks, nearly six feet high, and from 45 to 55 grains in each ear. The wheat is bearded and thick heads, not unlike barley. The leaves are nearly an inch broad. It is evident, therefore, that the general character of Egyptian wheat was the same 3,000 years ago that it is now, bearded, clubbed, and the grain dark or inferior. The wheat which has been circulated under the name of Texas or California wheat, is a variety of the same kind, but containing more kernels to the ear. One which was forwarded to us, contained 109 kernels. The character of the wheat, however, renders it unfit for fine flour, and our experiments on its productiveness was not favorable to an extension of its culture.

Gapes in Chickens.—A writer in the Tennessee Agriculturist, states that chickens or fowls fed with corn ground coarse, as for hominy, will never have the gapes. It is not improbable such would be the result, and those whose fowls are liable to this disease, would do well to try this manner of feeding. It is only a preventive, however, not a cure.

MONTHLY NOTICES.

New-Castle Co., Delaware.—The Fair of this flourishing Society was held at Wilmington, on the 13th and 14th Sept. It was with extreme regret that we found ourselves unable, from our presence being required at Rochester, to accept the invitation extended to us to be present on the occasion. This was their 7th exhibition, and was in some respects superior to any that have preceded it. Seventy-four yoke of beautiful oxen were present, and attracted the universal admiration of all present, as they were paraded with banners denoting the districts from which they came. The Plowing Match here, as elsewhere, excited the greatest attention—14 teams were entered, all horses but one. The space plowed, one-eighth of an acre. The ox team, belonging to our friend C. P. Holcomb, Esq., came out ahead, performing the work in 21½ minutes, the others varying from 23 to 26 minutes. The Report of the Committee on the Plowing Match, of which E. Tatnall, Esq. was chairman, is a pattern for such reports, and we much regret that want of space prevents our publishing it at length. The premiums were awarded, 1st, to John Newlove—2d, to J. W. Andrews—3d, to John More—4th, to F. Lawden. The Society ordered a copy of *The Cultivator* to be sent for one year to the holders of the several plows. The Address by Dr. Darlington of Westchester, Pa., is spoken of in the highest terms, and is soon to be published.

The American Institute.—The show of stock, implements, farm products, &c. at the late Fair of the Institute, was respectable, though perhaps not on the whole, equal to some of its previous exhibitions. The Short Horns were well represented by animals from the yards of Messrs. Vail, Hull, and others of this state—Dr. Poole of New-Jersey, and Messrs. Whitney and Watson of Conn. The prize for the best bull over two years old, was awarded, as we are informed, to Mr. Vail's beautiful bull "Meteor," by Wellington, out of Duchess, both from Mr. Bates' stock.

Town Fair.—The enterprising farmers of Friendsville, Susquehanna co., got up a splendid Cattle Fair on the 1st of Sept. There were present 300 head of horned cattle, more than 100 horses, with sheep, swine, &c. The Durham breed and its crosses, were predominant, and a couble of bulls, owned by Mr. Carmalt and Mr. Turrell, are spoken of as very superior. We hope this example of the farmers of Friendsville, will be followed, for we should rejoice to see these Town Fairs springing up in every section of our country.

Domestic Wine.—Among the articles exhibited at the State Fair, were several bottles of wine, manufactured from the Isabella and Catawba grape, by E. Fay & Sons of Portland, Chautauque co. Though it might not suit the taste of the drinker of "choice old wines," it was a very good article, and had this recommendation, that it was "the pure juice of the grape."

Bommer's Method of making Manure.—We give place to Mr. Bommer's announcement of a new and enlarged edition of his "Method of making Manure," in our reading columns, notwithstanding it partakes so much of the character of an advertisement, because, from what we have seen and heard, we have the fullest confidence that it is a work of great practical utility, and that by following his directions our farmers may greatly add to, and increase the value of their manures. We would, however, advise no one to purchase it who does not improve all the advantages he now possesses to increase the size and value of his dung heap. It will be of no use to him who by his want of attention or industry, fails to improve to the best advantage, the sources of wealth which he now possesses, because to make manure, even by Bommer's process, requires labor and care; but the farmer who is willing to gather up all those substances within his reach which may be made to enrich his fields, will find in this "Method," information which will materially aid him in converting these matters speedily into a "rich, unctuous and durable manure."

Horses.—H. C. Merriam, Esq. editor of the Farmer's Advocate, Boston, who was present at our State Fair, speaks of the show of horses as follows:—"The horses exhibited were very numerous, mostly descendants of horses imported from England. In this department, the show surpassed that at Albany the last year. About a dozen colts by Sir Alfred, imported into Rochester, by Mr. Thomas Weddle, abundantly proved that our breed of horses may be as much improved by availing ourselves of improvements already made in the mother country, as our cattle and sheep have been. We think the remark is not extravagant, that Mr. Weddle, in the importation of Sir Alfred, conferred upon Western New-York a greater benefit than he could by a direct donation of $300,000. Horses of this stock are worth at least a third more than the common horses of the country. They are a beautiful dark bay, and from their large size and speed, admirably adapted to the coach and the plow, and are said to be the descendants of the Cleveland Bays of England."

Value of Time.—From the manner in which time is wasted, it is fair to infer that few are aware how much may be accomplished when what may be called its shreds and parings are fully occupied. The celebrated Frenchman, Chancellor D'Augesseau, had a wife who habitually kept him waiting some ten or twelve minutes, when called to dinner. These minutes, and these alone, he devoted to the composition of one of his works; and in fifteen years, three quarto volumes were produced, which are still admired, and still remain a proof of what men could do, were all their time employed in well directed effort. How often do we hear men complaining they have no time to do this, or that, to read, to inform their minds, when more than the time used by the Chancellor to produce his great work, is lost by them, thrown away without profit to any one.

POTATOE IN FRANCE.—It is well known that the introduction of the potato into France as an article of food, was seriously resisted by the common people, and the persistance of the government in spreading its culture had well nigh led to fatal disturbances. In doing away these prejudices founded on ignorance, no one was so active as the celebrated chemist Parmenter, and it was he to whom Louis XIV. said, "France will one day thank you for having found bread for the poor." This is about to be accomplished. The city of Montdidier has taken measures to erect a bronze statue to the memory of the philosopher for his services in this respect. The subscription is headed by Louis Philippe, and on it are most of the names of the distinguished friends of humanity and science in France. Public monuments are rarely more worthily erected.

AMERICAN SATIN.—Mr. Turner of Nashville, Tenn., among other products of his looms, has turned out one piece of satin vesting, of about 40 yards, which the papers of that city pronounce of admirable quality, strong—heavy—glossy,—and we are glad to say the demand was such as to prove an encouragement to the spirited manufacturer.

EXTRAORDINARY WHEAT.—The Norwich Mercury says:—Last week the writer of this, saw within a few miles of Lewes, in Sussex, *five pair of oxen* yoxed to *one plow*, and driven by two men and a boy. The wheat is very fine in this district. Upon the farm of H. Blackman, Esq. of Sussex, there is wheat nearly 7 feet high—the straw like reeds, the ears full, and the stems as close as they can stand. On the farm of Mr. Grantham, the celebrated sheep breeder, the wheat is of the same character, and is expected to yield not less than from 14 to 15 *coombs* per acre. [A coomb is 4 bushels.—EDS. CULT.]

THE COTTON CROP AND CULTURE.

WE give the following extract from a letter of our friend AFFLECK, formerly editor of the Western Farmer, but now a planter at Ingleside, Adams county, Mississippi. The time has not yet come, but we hope it will ere long, when we can take the tour he proposes. The proprietor must "stay at home to keep the Cultivator agoing;" Mr. Gaylord, his associate, residing on his farm in Onondaga county, to which he is too much attached to permit us to indulge the hope that he would leave it to take the sole charge of the Cultivator for the time necessary to enable us to accomplish the tour we so much desire through the south, southwestern and western sections of our glorious Union. In the mean time, we must depend upon our numerous readers in those sections for such facts and suggestions as will enable us to do justice to their interests. We shall continue our extracts from Mr. A.'s letter in our next. It is dated Oct. 12, 1843:

"We are in the midst of a most extraordinary picking season. The cotton is exceedingly backward in opening, much of it rotting in the bolls; heavy rains almost every day; and on a majority of plantations, from one-third to one-half the hands sick. Very few planters have out two bales to the hand, whilst usually, at this date, about four are housed. I had out fully double the quantity, last year at this time, that I have now. I have seen several fields on which, already, scarcely a boll is left to open.

"With reference to manuring for cotton, I may state that on one piece of average land, on which I put about 200 bushels per acre, of manure broadcast, and plowed under, running two good plows in the furrow, thus turning over at least six inches of earth that had never before been disturbed,—on this piece of ground, the estimate made by those who profess to be able to judge, varies from 2 to 3 bales, generally at 2¼. The bolls are *large* and very numerous. The distance was seven feet by from 30 to 40 inches from plant to plant—too close, it may be, though of this I do not yet feel convinced. The plants stand about seven feet in height. On the same land, unmanured, I have, it is supposed, about one bale to the acre. I may remrrk that the crop on this place, this year, happens to be one of the *very* few good crops in the country. In another small field of about 35 acres, on this place, which had been pretty well manured for corn, last year, I have already gathered 25,000 lbs. of seed cotton, at the second picking over, and not more than one-half the cotton is yet open. On the unmanured land, which has been cropped in cotton for eight to fourteen years in continued succession, I have but a very poor yield—perhaps half a bale, much of the crop being ruined by rust. That piece, some four acres, which was turned over by two plows in a furrow, was tended with less than one-half the labor bestowed on any other piece; the crab grass gave no trouble. On much of the place, *scratched over*, as is usual, the grass is as tall as the cotton; it has rained so incessantly, that it *could not* be killed."

☞ It will give us pleasure to send the books to which Mr. A. alludes, if he will direct us how to forward them. We will send the bound vols., if they can be shipped from New-York, or we can send them in sheets, if the postage will not be too much. We should also be glad to send a copy of the same work to our friend of Log Hall, if it could be sent in the same package.

AGENTS FOR THE CULTIVATOR.

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☞ Mr. HENRY M. LEWIS is our traveling agent in Alabama, Tennessee and Missouri.

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LUTHER TUCKER, Proprietor.

N. Y. S. AG. SOCIETY.

☞ THE next meeting of the Executive Committee of the N. Y. S. Ag. Society, will be held on the second Wednesday of this month, at 10 o'clock, A. M. at the office of the Cultivator. A punctual and general attendance is requested.

L. TUCKER, Sec'y.

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PORTRAITS of *Animals, Architectural Plans, Views of Buildings, New Inventions, Patent Machines, &c. &c.* neatly and promptly executed. *Nov.* 1, 1843.

SUBSOIL PLOW.

THE prices of the Subsoil Plow described on another page of this paper, are as follows, viz: No. 1, $8—No. 2, $10—No. 3, $12, with extra points. These plows may be obtained at 176 Market st., Philadelphia, of D. O. PROUTY.
Oct. 12.

FARMS FOR SALE.

TWO good Farms for sale, near Hoosic Falls in Rensselaer county. The south farm contains 90 acres, and the north farm contains 87 acres. These farms are productive—first rate arable land, with suitable dwelling, outhouse and orchard to each; they are wooded and watered, &c. This property is so situated as to make one or two farms, and will be sold to suit purchasers.

A productive Farm in the town of Stillwater, county of Saratoga, 6 miles from Ballston Spa, and 17½ miles from Lansingburgh. It is pleasantly situated on the south end of Saratoga Lake, containing 65 acres of land under good improvement, is well wooded and watered, a new commodious dwelling and out buildings, &c.

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THE subscribers are now ready to receive orders for superior Trees, viz: Apples, Plums, Pears, Cherries, Peaches, &c. &c., from their new nursery. Trees are all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention. WILSON, THORBURN & TELLER.

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THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

TO THE SUBSCRIBERS AND READERS OF THE CULTIVATOR.

THE present number closes the volume of the Cultivator for 1843, and we may venture to express the hope that the time we have spent in the company of our friends and readers, has not been altogether without its pleasures and its profits, to all parties. If we have not done all that we could have wished, we have the satisfaction of knowing we have done what we could to interest and instruct; and with our increasing means, and the favors of our accumulating list of intelligent correspondents, we trust hereafter to make "The Cultivator" still better correspond with the importance of the cause it advocates. For the past we are truly grateful; for the future we have nothing to fear.

By a glance at our prospectus for 1844, which may be found in the present number, our readers will perceive that we have made some new arrangements, which we have reason to believe will be highly acceptable to our friends and patrons; particularly the change in the form of the Cultivator, and the establishment of a new and cheaper paper to meet the wishes of those who prefer a less costly, but still comprehensive and practical journal of agriculture. The prices at which these papers will be published, it will be seen, are such as is believed will leave no ground for complaint on that score; and as it will require an extensive circulation to support them at such low rates, we hope our present subscribers will come forward at once, not only with their own names, but such of their neighbors as may need a good paper for themselves or families. Let those who now patronize us, or intend to do so, hand their dollar or their fifty cents, as the case may be, to the postmaster or the agent, without delay, so-as to receive the Cultivator and Museum in season for regular reading and preservation. Will our subscribers and friends attend to this matter?

☞SPECIAL NOTICE.☜

ACCORDING to the practice pursued from the commencement of "THE CULTIVATOR," all subscriptions terminate with the volume. No papers will therefore be hereafter sent to our present subscribers until their subscriptions are renewed by payment for the next vol. Though this course has caused some complaint, it is the only safe one for us to pursue, as our friends will be aware if they will but reflect for a moment upon the impossibility of collecting the small sum asked for our paper, from our subscribers who are scattered over every state in the Union. While trusting out the paper would be ruinous to us, it can be no serious inconvenience to our friends *to hand their dollar to their Postmaster,* to be forwarded to us. By doing this immediately on the receipt of this no. they will secure the early and regular receipt of the next volume.

AGENTS IN CITIES.

THAT our subscribers in the principal cities may know where they can renew their subscriptions, we give a list of City Agents on our last page. They should renew their subscriptions previous to the 20th inst. to insure an early reception of the first no. of the new volume.

NEW SERIES OF THE CULTIVATOR.

THE publisher and proprietor of *The Cultivator* informs the friends and patrons of that journal, that at the beginning of the next volume in January, 1844, a new and enlarged series will commence, and the form of the publication at the same time will be changed from its present Quarto size of 16 pages, to a large Octavo of 32 pages each number. This change, which has been in contemplation for the past two or three years, has been determined upon in compliance with the wishes of many of our subscribers, who have been anxious to have the work in what they consider a more convenient form, both for reading and for preservation. Of the character of the Cultivator it can scarcely be necessary to speak, at this time and place. From its commencement it has taken the highest place in the list of journals devoted to the cause of the farmer; and in its series of volumes, forms perhaps the best agricultural library of the day. Its numerous and increasing list of contributors, unrivaled in extent and ability—the ample means in the power of the editors to give the most early and complete record of every thing that can interest the farmer, or aid in forming a correct opinion of the condition and progress of agriculture, and its extensive circulation, exceeding that of any similar journal in the world, has caused it to be looked upon as the principal exponent of agriculture in the country. The change of form will lead to no change of character. In the amount of agricultural reading—in its numerous and effective engravings and illustrations, and in its unwearied efforts to inform the mind and elevate the condition of the farmer, it will still be the same.

At the same time, the proprietor of the Cultivator will issue a new paper, to be called

THE FARMER'S MUSEUM.

It will be printed in the same condensed and beautiful manner as the Cultivator, on an octavo page of the same size, but will contain only 16 octavo pages, or one-half the quantity of the former.

Public opinion seems to have decided that a 50 cent paper is necessary; and from all parts of the country the proprietor of the Cultivator has been urged to undertake the publication of such a journal. The favor with which the Monthly Genesee Farmer was viewed, the great good it was accomplishing, and the extensive circulation it had attained, while conducted by him, is considered a proof that a similar cheap publication, *made up from the ample pages of the Cultivator,* and practically adapted to the wants of the thousands whose moderate means prevent the receipt of more expensive journals, will be hailed as a desideratum by the farming public.

By an examination of the terms annexed, it will be seen they are such as is believed will make it an inducement for individuals to act as agents in procuring subscribers to these works. There is scarcely a neighborhood, or town, in which an active person, interested in the cause of agriculture, may not in a short time obtain from 20 to 100 subscribers; and we would suggest that there are hundreds of young men, who might spend in this way a few days or weeks, with greater profit to themselves, and perhaps more advantage to others, than in almost any other. Our numerous friends and subscribers in all parts of the Union and the Canadas, are respectfully requested to aid the cause of agriculture, by bringing the contemplated change in the old, and the establishment of our new publication, to the notice of their neighbors. Postmasters, and others, who have heretofore so kindly interested themselves in our behalf, will add greatly to their present claims on our gratitude, by continuing to receive and forward the names of those who may wish to become subscribers. The many Editors with whom we exchange, will greatly oblige us by calling the attention of their readers to our new arrangements. As no means, or expense, will be neglected to sustain the present high reputation of the CULTIVATOR, and render the MUSEUM worthy a place in the home of every farmer, and as the terms adopted are such that an extensive circulation only can afford remuneration for either, it is hoped an early and cheerful response will be made to this appeal, and a list of subscribers forwarded, such as it is believed these journals will deserve.

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The Museum will be printed on a sheet just one-half the size of "The Cultivator," 16 pages, large octavo. Single copies 50 cents—Fourteen copies for $5,00—Thirty copies for $10,00.

☞ All subscriptions must commence with the vol. at the commencement of each year; and all orders must be accompanied with the money, and come free of postage; as the exceeding low rates at which the papers are published, forbid the risk and loss heretofore sustained by crediting the paper to Agents.

N. Y. STATE AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society will be held at the Society's Room in the old State Hall, Albany, on the 3d Wednesday (the 17th,) of January, 1844, at 10 o'clock, A. M.

Persons intending to compete for the Society's Premiums on Field Crops, Essays, &c. are reminded that their statements and essays must be sent to the Recording Secretary, Albany, before the first of January.

Presidents of County Ag. Societies are also requested to transmit the Reports required by the statute, to the Recording Secretary, previous to the annual meeting.

LUTHER TUCKER, Rec. Sec'y.

Albany, Dec. 1, 1843.

THE NEXT STATE CATTLE SHOW.

CONSIDERABLE interest is already beginning to be felt in the selection of the place for holding the next Exhibition of the State Ag. Society. Last year but two places sought for it—Rochester and Utica. Utica having failed this year, will probably expect it next; but it will, we learn, have Auburn and Poughkeepsie to contend with. At the late meeting of the Cayuga Ag. Society, a resolution was adopted inviting the State Society to hold its next exhibition at Auburn; and a meeting was held at Poughkeepsie, on the 13th of last month, at which the following, among other resolutions, was adopted:

Resolved, That the Fairs of the State Agricultural Society are justly attracting the notice of all our citizens—that being for the State they should be held in different sections of it—that as one has been held at Syracuse, another at Albany, and a third at Rochester, we respectfully request the Executive Committee of the State Society to hold their next Annual Fair at the village of Poughkeepsie, in the county of Dutchess—that we pledge ourselves to make every necessary arrangement for the accommodation of the stock and articles which may be exhibited, and for the entertainment of the persons who may attend it.

A committee, consisting of thirty of the most respectable citizens of Dutchess county, was appointed to present the proceedings of this meeting to the Ex. Committee of the State Society, and to urge upon them a compliance with the wishes of the meeting.

THE COTTON CROP.

EXTRACT of a letter to the Editors of the Cultivator, from Dr. N. B. CLOUD, dated Magnolia, Macon county, Ala., Nov. 5, 1843:

"With regard to the extent of the present crop of cotton, it is a difficult matter to speak in any thing like satisfactory terms. There is, however, no doubt, as reports from all quarters most satisfactorily affirm, but that the crop will fall far short of the last. I have no idea, from the information we have, that this crop can reach 1,800,000 bags. We have had a fine fall for gathering cotton, and I presume the staple of the present crop will compare finely with any previous one. Our planters are beginning to realize the advantages of extra care, pains taking and attention bestowed in gathering and preparing their cotton for market. The day is rapidly hastening and is close at hand, when our planters shall correctly understand their best interest, that no cotton will be offered in market but that of the first quality. Our inferior cottons should be manufactured by ourselves into cotton bagging and rope, &c., for sending off the better qualities. I have no doubt but it would answer much better than any fabric heretofore used, beside opening a new and large channel of consumption. Our water power is abundantly plenty, and the intelligence of our people in every way adequate to the undertaking. It must and will certainly take place, and it will be a glorious era for the south. Nothing is more clearly evident than the advantages of such enterprise; not only to the planter must it prove advantageous, but to mechanics, to commerce and the manufacturers."

Extract of a letter from Barbour county, Alabama:—"Our crops through this region of country will fall far short of last year, particularly our cotton crop, which is the great crop of this section of country. Having much less of that valuable staple to take off and prepare for market, we will be enabled to prepare it much nicer than if the crop was very abundant."

☞ For Monthly Notices, see page 188.

AGRICULTURAL REVIEW OF 1843.

In looking back on the state of the country, the crops, and the condition of agriculture for the past year, we find much cause for pleasurable gratulation, and for gratitude. The season has been a favorable one on the whole; the crops have been abundant, and the condition of the farming and planting interests, and as a matter of course the country, has been constantly improving. In a country like ours, embracing such a variety of climate, and so many objects of culture, it would be little short of a miracle, if in every part, and with every variety of product, there should be no failures; if every where the proper condition of temperature, of heat, moisture, and duration, should be precisely what is required. Such a state of things it is unreasonable to expect; but local failures scarcely effect the general result.

The temperature of that part of the year which has the most influence on the labors of the farm, has been favorable to the maturity of the crops. September, however, was warmer by several degrees than it has been for some years past. There has been numerous and sudden fluctuations of temperature the whole season, and these have not been without their influence on the crops as well as the general health. Thus on the first of June, more or less snow fell over most of the northern states, and about the middle of Sept. frosts, sufficiently severe to injure corn, occurred in many places. From the 25th of Sept. to the present time, the weather has been very unfavorable, and its effect on the securing and preservation of crops, has been very injurious and will be widely felt. Snow, to the depth of from 10 to 20 inches, fell over most of the north, previous to the middle of November; and the frosts at the south in October, were destructive to late cotton and tobacco.

The Wheat Crop of the United States for the year 1843, is greater than has ever before been produced. Immediately before the harvest, prospects were discouraging. In some places the Hessian fly had appeared, in others the grain worm, and nearly every where the grain was standing thin upon the ground, having in some places been smothered with snow, and in others frozen out in the spring. To the surprise of all, the insects did comparatively little damage, the heads of the grain came up large and long, and the berry was of the finest quality. The yield per sheaf, was unusually large, and more great crops of wheat have been grown the present year, than in any previous one. About two millions of barrels of flour passed down the Erie canal, and the quantities received at Baltimore and New Orleans, have been unusually heavy. A great quantity of land has been seeded this fall with wheat, but those who were late in their labor, were obliged to put in their seed when the soil was not in the best condition. Wheat should always be sown before the 15th of September; later than that, the probability of getting the seed in well, lessens daily. The practice of sowing on clover or grass leys without fallowing, is gaining ground, and many of the best crops taken off the past year, were grown in that way. With clean grounds and a proper rotation, this is doubtless the best method of raising wheat, and this condition of farming is what all should aim at.

Indian Corn is good; not better than in some previous years, but a fair crop. The cold of early summer retarded its growth, and in some places the extreme dry weather of the month of August and part of September, had a bad effect. Still the old adage, that so far as corn is concerned, "dry weather scares folks to death, and wet weather starves them to death," has as usual, in general held good. Where the corn felt its influence most, it was not so much in hindering its growth, as in preventing the formation of grain, or retarding the advance of the ears to maturity. In some instances, on very dry warm soils, we knew some fields that seemed to remain stationary for nearly a month, the plants simply obtaining moisture enough to prevent their dying, but not enough to form or aid the maturing of the ears. In such cases the corn was late, and in many, perhaps most instances, suffered from the frosts of September. The great snows of the forepart of November, found much of the corn still in the field, and it has required no little skill and exertion to save it in good condition.

Rye, Oats and Barley, have been good crops, and large quantities, oats in particular, have been raised. Barley is not as extensively cultivated as formerly; as in the great barley producing districts of central New-York, it is probable not more than half as much was sown in 1843, as in some previous years. Two causes may be assigned for this falling off. There was not as much demand for barley for brewing as formerly, the temperance reformation having reached the consumption of beer, and farmers found that the constant cultivation of spring crops, was getting their best lands so foul as seriously to injure their productiveness. As the price of barley rendered its cultivation as an article of profit, of little consequence, much barley land has been seeded down, put into hoed crops, or fallowed for wheat. The barley grown was of good quality, and very productive.

The main root crop of the country is *Potatoes;* indeed, we question whether there is any one that in the middle or northern states contributes more to the food or the comfort of the inhabitants than the potatoe. We are sorry to say that this crop has suffered much from several causes, and that while in some districts there is a general failure, in no one, as we can learn, has it reached an average crop. The potatoes are small and few in number, were late in maturing, and many were gathered prematurely. At the time of writing, (Nov. 20th,) a considerable part of the potatoe crop is still in the ground, and the prospects for digging are not of the best kind. Still a few fine days would clear the potatoe fields, and doubtless every exertion will be made to secure a crop on which so much is depending. In those places where the drouth was most severe, the potatoes have suffered more than the corn, and their maturing more sensibly retarded. In many cases, indeed, the tops dried in the fields long before the roots had ripened, and thus all possibility of improvement from the late rains was cut off. We saw many instances in which the first set of tubers had sprouted for the second crop, owing to the early stage in which they had ripened. It is doubtless to be attributed to this premature ripening, that decay or rot, is so extensive among the roots gathered, so much so as in many cases to threaten a total loss. In England and Scotland, the potatoe crop has for several years past been liable to great injury, and in some cases a total failure from a disease called the *curl*, in which the tops died immediately after the formation of the tubers commenced, leaving them wholly unfit for use. We have seen some cases of the same difficulty here, and it is not impossible that it may become as destructive here as abroad. No satisfactory solution of the cause of the evil has been given, though it has received much attention from the ablest men of these countries; and it would be well for the American farmer to be as far as possible on his guard, and as preventives never plant potatoes successively on the same soil, or use any but sound mature seed. It is probable raising new varieties from seed, will eventually be found the best method of preventing diseases in this important vegetable; although the opinion that varieties degenerate and run out, has as yet received no positive confirmation.

The other crops, such as hay, roots in general, garden vegetables, &c. have been very good, and the early appearance of winter, indicates that all will be required for the flocks and herds before the next spring. In this respect our friends at the south and west, have greatly the advantage of us northerners, as it demands no small part of our summer labor to provide food for our animals during our winters. It is evident great improvements in the wintering of stock might be effected, by the adoption of the practice of stabling, or providing good warm shelters for animals, and by cutting or grinding the food furnished them. Grinding the cob with the corn, adds fully one-third to its value for feeding, and the converting straw or cornstalks into chaff before using, is attended with equal advantages.

That there has been decided progress made the past year in the agriculture of the country; that the prospects of the planter and farmer are steadily but constantly improving; that the importance of agriculture to the country is becoming more apparent, and more forcibly impressing the minds of our statesmen and economists; and that nothing but the diffusion of intelligence, and a proper spirit of independence among the owners and tillers of the soil, is wanting to place this great interest on its true foundation, is apparent to all who are observant of the signs of the times. The numerous cattle shows and fairs that have been held the past season in all parts of the Union, and the increased interest and spirit with which they have in general been conducted, affords a cheering proof not only of the advantages of such associations, but of the better feeling which the assurance of improvement and success always imparts. We conclude this brief retrospect, with the remark that in the past the agriculturist has abundant cause for gratitude, and in the future he may confidently anticipate a still further development of that improvement in his business and its profits, of which he already beholds the dawn.

AGRICULTURAL ADDRESSES, REPORTS, &c.

Few things have given us more satisfaction than the great improvement to be seen in the mass of Addresses, Reports, &c. delivered or made before the Agricultural Societies and associations of our country the present year. They are decidedly more practical and pointed in their character, and the writers seem to have been fully impressed with the truth that agriculture, and its kindred pursuits, was to be the theme of their discourses, and not any topic, however relevant, that would admit of a display of learning or eloquence. Men of the highest intellect and the most commanding positions, have lent their aid to give interest to these festivals, and it is no disparagement to them to say that their efforts have at least been equaled by the farmer, who, called to address his friends, prepared his response at such intervals as he could spare from the toil of the field. We like this mingling of men engaged in different pursuits; it enlarges and liberalizes the mind, and lays the foundation of friendly intercourse and mutual respect, broad and deep in the best elements of our natures.

We have before us the well written and practical address of Mr. Mather, before the Middletown (Conn.) Ag. Society, Oct. 1843. The following extract will show the manner in which he manages the important subject of manures:

"Of the methods which I have tried, I consider the following as the most economical. The barnyard should be excavated in the form of a dish in the center, leaving a margin on all sides, sufficiently broad for the comfort of the stock, and convenience in feeding. In the fall, the yard may be covered to the depth of ten inches or a foot, with materials from the swamp, the bottoms of ditches, or with turf from the roadside. To this should be added all the weeds and refuse of the farm. And I am strongly of the opinion that here is the most profitable place to spread all the lime, ashes, plaster, and salt, which we design to apply to the land in the coming spring. The liquid from the stable, should be led into the middle of the yard, and the manure from the stable, as fast as it is made, be equally spread over the whole, that the quality may be uniform. No water should be permitted to come into the yard, except what falls directly upon it.* * * By the treading of the cattle during the winter and spring, the whole will be incorporated into a uniform mass, and in a suitable condition to apply to the land. By pursuing substantially, this course, I have more than doubled the quantity and value of the manure on my farm.* * * * A Dutch farmer, it is said, built his barn directly over a small creek, leading into the Hudson, that the stream might carry away all the filth. We are not quite so improvident as the Dutchman, but there are some farmers, who, in order to secure a dry yard for their stock, are very particular to leave *a drain* to carry off the wash. *They might as well cut a hole in their pockets.*"

The Address of the Rev. Mr. Henkle of Lexington, Kentucky, delivered in the chapel of Transylvania University, July, 1843, and having for its subject the "Moral Dignity and General Claims of Agricultural Science," is a production of high order. We have room for only a single extract, showing the beautiful manner in which a knowledge of agricultural science unfolds many of the mysterious changes that occur in the organization of plants, as performed by the laws of Nature:

"A seed, so minute as to be scarcely visible to the naked eye, will be found a thing most perfect, and wonderfully adapted to the ends of its creation. Within is deposited the perfect germ of a future plant, surrounded with *gluten* and *starch*, substances which give value to grains as food—and the whole enclosed in a protecting shell of woody fibre. When the seed is cast into the earth, under favorable circumstances, the heat and moisture present in the soil, produce fermentation, and fermentation causes the seed to germinate or sprout. But as the embryo plant has neither roots by which to collect nourishment from the soil, nor leaves by which to extract it from the atmosphere, instant death must happen to it, had not bounteous nature supplied it with provision through this transmutation to new life, in the gluten and starch which surround it. Yet the tender organs of the infant germ are incapable of appropriating this food in an undissolved state, and have not the power, aided by the moisture to which it has access, to dissolve it; but from the gluten is formed, at the base of the germ, a substance (called *diastase*,) which effectually dissolves the starch, and prepares it as food to nourish the germ until its functions acquire such maturity as to draw support from its destined sources, the soil and the atmosphere. As the sap thus prepared, ascends in the young shoot, the dissolved starch is changed into sugar; and when it reaches the light, this sugar is converted into woody fibre, and its color is changed to green. But in the ripening of the grain, the sugar of the sap is again changed to starch, which, if not used for food in that state, is destined to be converted back again into sugar, to nourish the young germ of a future generation."

The Henrico Agricultural Society at Richmond, (Va.) is one of the most active and flourishing associations in our country; a result to be expected from the numerous able and public spirited men combined in its direction. The Address of Mr. C. T. Botts, Editor of the Southern Planter, at their October anniversary, is an able and eloquent exposition of the rights and the duties of the farmer; but here, as in the preceding cases, we are limited to a single extract, and in it is conveyed a most weighty and important truth:

"That agriculture is the mother of all arts—that it was the primeval occupation of man—that it is the foundation and source of all industry, has been repeated by every writer and speaker on the subject for the last 500 years, and these declarations are not less true than trite. But there is one view of the subject that I have never seen taken, at least never pressed with sufficient force upon the public consideration; I mean the importance, not to say *necessity* of agriculture to the support of our republican institutions. These in their nature depend upon the purity and virtue of the people, and they have most to dread from that foul corruption, which seems to be engendered in man from contact with his fellow creatures. I know it has been claimed for cities, and not without reason, that history proves them to have been the ardent friends of liberty, and ever the pioneers in the great struggles of freedom which man has been forced to wage with his oppressors. They have been the first to resist oppression, not from a greater love of liberty, but because their local position gave them greater facilities of union; but if they are banded together for good, they are frequently united for evil, and it is in the corruptions engendered in a great city, that the demagogue loves to riot. With an almost boundless territory, and the most fertile soil in the world, we must remain for many centuries an agricultural people. Villages, such as Richmond, may, nay must spring up, and one or two, as New-York, may in time grow to be the cities of which I speak. But it will be long, very long, ere the leaven of purity and honesty derived from agricultural occupations, will not more than counterbalance all the vice and corruption that seem inseparable from a congregation of great masses of mankind."

Ontario County Fair.—The amount of the show at this Fair on the 18th, was 95 cattle, 58 sheep, 65 swine, 6 studs, 4 pairs matched horses, 4 single, before buggies, 20 mares and colts. The weather was most unpropitious throughout.

NEW PUBLICATIONS.

It is not often that we step aside, in this department of the Cultivator, to notice works not more or less devoted to agriculture; but in the present instance, we feel justified in calling the attention of our readers to a work of the first importance to the great cause of general education.

We have before us the 9th edition of the "Introduction to the Science of Government, and Compend of the Constitutional and Civil Jurisprudence of the United States, with a brief Treatise on Political Economy; by Andrew C. Young;" adapted to the use of schools and families, and printed and published by William Alling, bookseller, Rochester.

This neat volume of 350 pages we have examined attentively, and can give it our most hearty approval. There are few subjects of more importance than the one of which it treats. In a country where every individual has a voice in the government, it is surely the duty of all to understand the obligations and the responsibilities resting on him. The "Science of Government" has been prepared with express reference to this object, and is most admirably adapted to give the knowledge so much required. The style is clear, plain and familiar, and the subjects are treated in such a manner as to be easily comprehended by all. All the most important and leading features of our national and state constitutions; the laws, powers and duties of the governing and the governed, are clearly presented; and to the young man offers a mass of information to him invaluable. The want of such a book, as a text and reading book in our common schools, has long been known, and the volume before us will, we are confident, be considered as a most timely supply of a want generally felt hy all acquainted with our schools. It has already, we are gratified to learn, been extensively introduced into our higher schools and academies, and not a season should pass without at least one class in every school in our broad land being provided with the "Science of Government" as a school book. So serious has been the defect in our school books in this particular, that we cannot too earnestly recommend to parents and teachers the adoption of a work that promises so much for the young of our land.

DANA'S PRIZE ESSAY ON MANURES.

In our last we noticed the receipt of a copy of this Essay, and have since had an opportunity of examining it carefully. We can only say it is a worthy companion of the Muck Manual reviewed by us last year, and deserving the distinction conferred upon it by the State Ag. Soc. of Massachusetts. It forms a neat octavo pamphlet of 40 pages, and cannot fail of being extensively useful. The introductory paragraph exhibits at once his manner and the object of the Essay:

"There is one thing settled in farming, stable manure never fails. It always tells. There are no two ways about it. There is here neither theory, nor speculation, nor doubt, nor misgiving. 'Muck it well, master, and it will come right,' is an old proverb. It is considered a fact so well established, that nobody thinks of disputing it. There is an advantage in asking why barnyard manure never fails. The answer is easy. It contains all that plants need for their growth. If we know then what plants contain, we can easily tell what is in manure. The whole doctrine of manures then falls into two plain principles, on which hang all the law and the '*profits*' of agriculture. 1. Plants contain and need certain substances which are essential to their growth. 2. Manure contains all those substances that plants want."

The essay consists of a thorough chemical examination of plants. divested of all technicality, as far as possible, and is a beautiful illustration of skill in the adaptation of science to the purposes of the farmer. Dr. Dana, it is well known, is a warm advocate of the formation of manures from peat or muck, by the addition of some of the alkalies, ashes or soda being preferred; and no inconsiderable part of this essay is employed in showing that a compost so prepared, possesses all the virtues of stable manure, while it is much cheaper, and in its results more durable. The numerous experiments made by Dr. Dana, have confirmed him in the opinions advanced by himself and by Prof. Liebig, that ammonia is the grand agent in fertilization; and it appears difficult to escape from the argument, as stated in the Essay. In connection with this subject he states a fact, important to those who rely on green crops, buckwheat, corn, clover, &c. for manures, which is that—"While the straws of the grain bearing plants afford for every ton of green crop turned in, about three quarters of a lb. of ammonia, green corn stalks and herds grass about five pounds of ammonia per ton, red clover affords seventeen pounds of ammonia per ton. The great value of clover in enriching land is thus made evident."

Dr. Dana's labors are now directed into the right channel. There are few men who are doing so much for the cause of agriculture as he; and he deserves the thanks of every farmer. We trust he will persevere in the broad field of usefulness he has chosen.

ANALYSIS OF SOILS.

A. G. Johnson, Esq. of Benton, Fla., says:—"I am in need of a treatise on agricultural chemistry, that I may analyze my soil and learn its character and constituents. Will you recommend something that will suit me?"

The volumes published by Davy, Chaptal, Dana or Liebig, would undoubtedly either of them contain the information wished by Mr. J. But if his object is analysis, the Lectures on the Application of Chemistry to Agriculture, by Prof. Johnston, published at New-York by Wiley & Putnam, will be more complete and satisfactory than any work with which we are acquainted. The "Lectures" will also be found in the highest degree interesting on nearly every topic connected with the science of agriculture.

WHEAT ON THE ARISTOOK.

Our correspondent "Georgius," of Hallowell, Me., who makes some inquiries relative to the raising of wheat in the Aristook district, the kind best adapted to the purpose, and the price of seed, &c. is informed that there is no obstacle to the raising of good wheat in that latitude, which should deter the farmer from its cultivation. The chief difficulties there, will be the possibility of frost after the stalk has commenced or the ears formed, which would be fatal; or the smothering of the plants during the long winter, with such deep snow and the ground unfrozen. The first it is presumed would be of rare occurrence; and the last sometimes occurs in all the northern states. Spring wheat would not be so liable to these casualties; but it does not produce as much per acre as winter wheat, and is not as valuable for flour. Purchasers make a difference of from eight to ten cents in favor of winter wheat. The most valuable wheat for flour is the white flint, although there are some varieties, perhaps, more productive on the whole. Gen. Harmon of Wheatland, Monroe co. in this state, furnishes the most beautiful seed wheat, and charges only twenty-five cents per bushel more than the price of ordinary wheat, making his sale price range from $1,00 to $1,25 per bushel. The cost of transportation from Rochester to Boston, would be probably not far from 75 to 100 cents per barrel. The best methods and times of sowing wheat, so as to have it endure the long winters of the Aristook country, will be most satisfactorily decided by experiment; but it may be remarked that as a general rule any where, wheat sown early and of large growth, is more apt to smother in the winter under snow, while it is not as liable to be thrown out in the spring and killed that way, as late sown wheat. With the exception of damage from the Hessian fly, winter wheat is not so liable to injury from insects as spring wheat, and is far less liable to blight or shrinkage, as it comes forward earlier, and is matured usually by the time the season most favorable for blight commences.

FOOD OF THE GERMAN PEASANTRY.

Veit, in his work on Husbandry, gives the following as the kind of food, and the quantity, on which the farm laborers in Germany usually subsist, and his account is fully corroborated by Howitt's Domestic Life in Germany.

For breakfast, from one-half to two-thirds of a quart of skimmed sour milk, with an allowance of two and a half ounces of barley meal (or 20 oz. to 8 persons) per indivdiual. For dinner, dumplings of wheat flour, 4 ounces of flour to a person, with skimmed milk; or if meat is given, three-fourths of a pound, with barley bread, constitutes the allowance. For supper, 2 pounds of wheat meal, made into meal soup in skimmed milk, for ten persons, with a pint of skimmed milk to each, and a pound and a half of potatoes, makes the meal. There are of course some variations in the mode of serving up this homely food, and on feast days boiled pork and beer are sometimes added to the ordinary provisions.

That such a mode of living is not unfavorable to health, the condition of the German peasant and his general longevity fully prove, but we can hardly believe a person could perform the severe tasks which meet the American laborer, with such food and in such quantities as are specified above. Certainly the living of the German laborer is of the most simple and primitive kind.

WALL FRUIT.

"As our climate (Orange co., Vt., 44°,) is too severe for growing the peach, quince, and every variety of our native grape, in the open field, could we not raise such fruits by the help of a fruit wall? An answer through your valuable paper, with some directions as to the best method of constructing a fruit wall, and some hints on training and pruning wall fruit, would much gratify Yours, &c., G. S. P."

Walls produce an excellent effect on fruits reared against or near them, in two ways; they protect them from cold winds, and they increase the temperature in which the fruit is growing, giving, as far as their influence extends, the climate of 30° in the latitude of 40°. Many of the more delicate fruits could not be grown to perfection in England without the aid of walls; hence walls for fruit purposes are much more common there than here. The construction or materials of the walls are comparatively of little consequdnce, provided it be sufficiently high, thick, and of a dark color. Brick or stone are the best, and where gardens are walled with these materials, they may be easily used for training fruit. A southern exposure is of course required. Almost every one has seen the more delicate fruits, grapes, &c. ripened fully in the open air against a wall in the northern states, and where no other is at hand, the wall of the house or other buildings is frequently used successfully. In planting and training wall fruit, the trees or vines should be set at such a distance from the wall as to allow space for the roots, and yet allow the branches or tops, as they shoot out, to be easily brought in contact with the wall where fruit is to be produced. To perfect the fruit, the branches should be trained or spread in such a manner as to allow the whole the benefit of the wall temperature as much as possible, and secured in such a way as to allow as little rubbing or friction as possible. The pruning must of course be conducted with reference to this object, or throwing the head of the tree in such a form that it may spread over the wall, and allow the fruit to be equally affected by the reflected heat. Our correspondent may find a full account of the methods and benefits of training, in Lindley's Theory of Horticulture, American edition, page 243 and sequel.

PREMIUM MILCH COWS.

At Worcester.—At the October Cattle Show and Fair at Worcester, ten cows were offered for the premiums to be awarded on milch cows. By the regulations of the Society, the quantity of milk given in ten days, from the 10th to the 20th of June, and from the 10th to the 20th of September, was to be ascertained by weight, and the butter made from this milk to be reported to the committee.

The first premium of $12 was awarded to Mr. Carpenter, for a cow of the Holderness breed, 4 years old. In the time specified, she gave 380 lbs. of milk, from which was produced 18¾ lbs. of butter; and from the 10th to the 20th of September, she gave 355 lbs. of milk, which produced 17¼ lbs. of butter. The cow was kept in pasture with ten others.

The second premium of $8 was given to Mr. Watson, for a native cow, 4 years old. In the time specified, she gave 401 lbs. of milk, which made 18¾ lbs. of butter, and from the 10th to the 20th of September, she gave 277 lbs. of milk, which made 15½ lbs. butter.

The third premium of $6 was given to Wm. Eames, for a native cow, 8 years old. In the time pointed out, she gave 340 lbs. of milk, which made 17¾ lbs. of butter, and from the 10th to the 20th of September, she gave 260 lbs. of milk, which made 13½ lbs. butter.

The fourth premium of $3 was awarded to Mr. Miles, for a cow 9 years old, which in the ten days in June gave 385 lbs. of milk, from which 18½ lbs. of butter was made, and in the ten days in September, 368 lbs. of milk, producing 17⅛ lbs. butter.

Mr. Allen offered a fine one-fourth Durham cow, which produced in the time specified in June, 335 lbs. of milk, from which 16¾ lbs of butter was made.

At Northampton.—Ten cows were offered for the premium, which was awarded to Mr. Hitchcock, for a cow entered as a native. Her average product of milk for the six months ending the 1st of October, was 49 lbs. per day, and in June and July, 58 lbs. per day. In butter, her average product during the same time, was 11 lbs. per week, and in July alone, 14 lbs. per week. During this period, he used the necessary milk and cream for his family of four persons. The committee state that though considered a native animal, she clearly partakes largely of the blood of the Short Horns; and that among the animals entered as of *native* and *foreign* origin, there was more of the blood of distinct imported races in the former than in the latter.

REPORT ON PLOWS.

In our last number we published the Report of the Committee to award the Premiums on Plows at the State Fair at Rochester. The Committee have since sent us the annexed statement:

"Since the first publication of the report, it has been discovered that the Clerk of the Committee made a material mistake in his minutes of the draft of the Caledonia Plow. The average was put down at 345 lbs., whereas it should have read 422 lbs. This, it will be seen, is a great difference, and would doubtless have altered the decisions of the Committee in their award of premiums, had the error been discovered in time. As it is, all that can be done is to wait for another year, when it may be hoped there will be more perfect instruments and better arrangements for a thorough trial.

"The Committee wish further to state, that Mr. Codding of Ontario county, had a plow at the Fair, of larger size than the one he had at the trial, and of the same pattern as the one for which he received a premium; but it was sent home before the trial, because one of the Committee informed him erroneously that only one size would be tested of the same pattern. They now think that his large plow would have obtained the first premium if it had been at the trial."

Improvement of Wheat.—At the late meeting of the Royal Ag. Society, Lord Hardwicke in some remarks on the importance of paying more attention to the selection of seed wheat, stated that in some experiments made to test the advantages of this, it was found that by pursuing a course of selection, the crops were doubled. "Thus the golden drop wheat had given 46 bushels per acre; a fine Suffolk variety 76 bushels; and another and still longer improved kind had reached 82 bushels per acre." Such statements illustrate most forcibly the importance of the course now pursuing by Gen. Harmon of Wheatland, for improving the wheat of this state, and the beautiful specimens exhibited by him at the State Ag. Fair at Rochester, and now in the Ag. Museum at Albany, show with the most decided success.

MONTHLY NOTICES.

Acknowledgments.—Communications have been received during the past month from Hon. H. L. Ellsworth, J. S. Skinner, John Lewis, S. L. Gouverneur, L. A. Morrell, An Amateur, L. Ashburner, D. C. Goodale, A. McDonald, Q., Solon Robinson, G. S. P., J. M. Harlan, T. Edgar, Orange Co., S. Weller, D. A. P., T. Fountain, A Subscriber, L. Durand, L. Physick, Martha, Hazlewood, R. L. Pell, A. Walsh, J. E. W., N. N. D., Marion, J. L. Worthington, John Bonner, T. D. Burrall, T. C. Baldwin.

Books, Papers, &c.—Low's "Elements of Practical Agriculture," a new edition, (the 4th,) received through Messrs. Wiley & Putnam, from London, but from whom we are not apprised—Young's "Introduction to the Science of Government," from William Alling, Rochester—Mr. Botts' Address before the Henrico Co. Ag. Society; Rev. Mr. Henkel's Address at the commencement of Marion College, on the "Moral Dignity and General Claims of Agricultural Science;" Mr. Mather's Address before the Middlesex Ag. Society; Mr. Ducket's Address before the Prince George's Ag. Society, and a Prize Essay on the System of Farming best adapted to the Tobacco growing counties of Maryland, by W. W. W. Bowie, Esq., from their respective authors—The Doncaster and Nottingham Gazette, from Rev. H. Colman—The Cattskill Recorder, from A. Marks, Esq.—The Washington County Post, from Dr. Fitch—The Connecticut Courant, from E. Cowles, Esq.—The Cortland Democrat, from H. S. Randall, Esq.—The Long Island Democrat—Addresses of Hon. D. D. Barnard and Gen. Tallmadge before the American Institute, and the "Silk Culturist," from A. Walsh, Esq.—Winter & Co.'s Descriptive Catalogue—Report of the Providence Atheneum—Descriptive Catalogue of Prince & Co.'s Linnæan Botanic Nursery, Flushing, and of Thomas Hancock's Nursery, Burlington, N. J.—Mr. Bacon's Address before the Berkshire Ag. Society, and Mr. Howard's, before the Muskingum Ag. Society, from their Authors—The Hampshire Gazette, from W. Lathrop, Esq., and The Elmira Gazette, from A. J. Wynkoop, Esq.

Illustrations.—We have now on hand, for the illustration of our next vol., engravings of a design for a House, by T. M. Niven—designs and plans for a Farm House and Farm Buildings, by J. J. Thomas—an improved Bee Hive, by "P."—a Gate, by J. Willard—views of Fences—portrait of a Shepherd's Dog—several farm implements, &c. &c. The drawings of Dr. Cloud, S. Hitchcock, Joseph Fowler, and D. A. D., are in the hands of the engraver. In its illustrations we intend the next vol. shall equal, if not excel, any preceding one.

Potatoes.—We give two papers in this no. on the subject of the rot in the potatoe, which is prevailing so extensively through the country. Thousands of bushels have been lost in this way in this vicinity. It will be seen that Mr. Fountain attributes the death of his swine to feeding potatoes which had been struck with the rot, though they were boiled and mixed with meal. The Utica Gazette mentions two instances where farmers lost their hogs from the same cause.

Sugar from Cornstalks.—If any of our readers have succeeded in making sugar or molasses from the cornstalk the present year, we shall be glad to receive a statement of the process pursued, for publication.

Mr. Colman.—We find in our English papers an admirable speech made by this gentleman, at the meeting of the Wentworth Farmer's Club, to which he was introduced by Earl Fitzwilliam, which it was our intention to have published in this paper, but we find ourselves unable to give it for want of room. It is pleasant to us to find Mr. Colman never losing sight of the necessity of ameliorating the condition of the laboring classes, and while engaged in receiving and communicating agricultural knowledge, never merging the moral and intellectual in the physical condition of the man. From the attention paid Mr. Colman, his facilities for observation, and his undoubted ability to improve his advantages in every respect to the utmost, there can be no question that his Reports will be of the highest value and importance.

"The Farmer's Mine."—Our amiable cotemporary in a neighboring city, whose pleasant criticism on our brief notice of the "Farmer's Mine," in the Sept. number of the Cultivator, appeared in the last number of his journal, is respectfully informed that the senior editor of the Cultivator did not pen the notice in question, and therefore his personalities might well have been spared. The senior editor of the Cultivator, however, is not so "ignorant of the usages of printers," as not to be aware that the practice of making books wholly with the scissors and paste, without the trouble of even connecting paragraphs, is somewhat unusual; and that when whole pages or chapters, are appropriated from a work translated with acknowledged care and accuracy, and at great expense, some acknowledgment of the translator's labors and merits, would seem appropriate and due. Further, the senior editor of the Cultivator cannot believe that our cotemporary could have been aware of the manner in which the "Farmer's Mine" was prepared, or he would have hesitated at endorsing it as "containing much original matter," as he has done in his notice of the publication.

☞ D. K. Minor presents his compliments to those who have used poudrette of his manufacture in the years 1841, 1842 and 1843, and requests of each a *detailed* statement of the *crops* and the *soil* on which it was used; the *manner* of applying it, and the *result* of its use, *especially* as compared with other manures, when used comparatively. His object is to publish a pamphlet giving *both* sides of the question, and one copy or more will be forwarded to those who comply with this request, that each may know how others have used it, and the result. An *early* compliance will benefit those who desire to use the article, and much oblige the inquirer.

The Season in Tennessee.—Extract of a letter from J. L. Vaughan, Esq. dated Caledonia, Nov. 15:—"This has been an unprecedented year from the first to the present date; winter having set in nearly a month ago. Heavy frost and rain every day or two: killing frost the 13th ultimo. Crops will be short of all kinds, and scarcity of money in the midst of all; otherwise the Cultivator would be taken generally."

The Farmer's Encyclopedia.—We have received the 16th and last no. of Carey & Hart's reprint of this work. Very great additions and improvements have been made to it by its indefatigable American editor, G. Emerson, Esq., making it one of the most valuable works the farmer can add to his library. The volume contains nearly 1200 pages, closely printed, and is sold in parts at $4, or at $5, bound.

The Silk Culture.—No. 6 of Greely & McElrath's "Useful Works for the People," is a Treatise on the Silk Culture in the United States, embracing all the information necessary to the culturist, a brief history of what has been done, and a great variety of matters of particular interest to all who realize the importance of the silk culture to our country. Price 25 cents.

Winter & Co.'s Catalogue.—A very great improvement has been made within the last few years by many of our nurserymen, in the getting up of their catalogues. Among the best of those we have seen, is that of Messrs. Winter & Co., proprietors of the Linnæan Botanic Garden and Nursery, at Flushing, L. I., whose advertisement will be found in this paper. Persons, with one of these Descriptive Catalogues in their hands, will find little difficulty in making a suitable selection of trees and plants.

The Medico-Chirugical Review.—The October no. of this popular medical work was promptly re-printed by R. &. G. S. Wood, New-York; 300 pages octavo, per no.—quarterly, at $5 a year.

Blackwood's Magazine for November, has been received from the New World office, New-York; where it is re-printed in two or three days after its arrival, at the low price of $2,00 a year.

Oats as a Green Manure.—We have noticed several instances lately in which this crop is highly spoken of for growing to be turned under as manure. A late writer in the South. Tem. Advocate, says he makes a practice of turning in oats annually, and finds his soil constantly improving. He allows no land to lie idle, but in the fall plows in all his stubbles, weeds, straw, &c. with such green manures as he may have on hand. Their decomposition furnishes a good preparation for the next year's crop.

A Good Cow.—Dr. Parker of the Asylum at Columbia, S. C., has a small native cow which cost him only ten dollars, which for two years past, has given milk constantly at the rate of from eight to twelve quarts per day; so says the S. C. Register of Agriculture of Oct. 26. It is a common practice at the great milk dairies in the vicinity of London, to keep a cow in milk as long as possible, as when she ceases to give milk she is fattened for the butcher. Few, however, even of the most celebrated breeds, equal in quantity for so long a time, this Carolina cow.

FEEDING ANIMALS.

Some very useful remarks, and important tables of comparison, are given in a late number of the Royal Ag. Soc. Journal, from the French of M. Antoine. The most important of these tables we may give hereafter, but at present we shall merely quote what is said about feeding animals.

"A certain quantity of food is required to keep an animal alive and in good health; this is called his necessary ration of food; if he has more, he will gain flesh, or give milk or wool. An ox requires 2 per cent of his live weight in hay per day; if he works, he requires $2\frac{1}{2}$ per cent; a milch cow 3 per cent; a fatting ox 5 per cent at first, $4\frac{1}{2}$ per cent when half fat, and only 4 per cent when fat, or $4\frac{1}{2}$ on the average. Sheep grown up, require $3\frac{1}{3}$ per cent of their weight in hay per day, to keep in store condition. Animals while growing require more food and should never be stinted."

According to this culculation, a sheep of 50 lbs. weight would require 1 lb. 11 oz. per day; and one of 100 lbs. weight, 3 lbs. 5 oz. Or it would require 199 lbs. of hay to keep the first sheep 4 months; and 397 pounds for the same time the last. This it is believed agrees very well with the experience of our farmers, who are in the habit of allowing about one ton of hay to every 10 sheep. It must be remembered, however, that this calculation is based on the very best hay; so that when the farmer whose sheep have had this quantity of thistle, johnswort, daisy, &c. &c. but all called hay, dealt out to them, finds his sheep dying off by dozens in the spring, he need not attribute it to an error of calculation. The great differnce between hay of the first quality, and that of inferior kinds, is too much overlooked by the farmer. According to M. Antoine, if 100 lbs. of good hay is taken as the standard, it will require 120 lbs. of the second quality to keep an animal in as good condition as the first; 140 lbs. of the third quality; and so on, until hay may be so poor as scarcely to support animal life given in any quantity.

IMPROVEMENT OF DOMESTIC STOCK.

The exhibition of stock at the numerous Cattle Shows and Fairs that have been held the past season, proves most conclusively that public attention is awake to the importance of their improvement, and in the great mass of reports of committees presented to the several associations, it is gratifying to find that the process of improving the native breeds by crosses, is in most cases recommended and insisted upon. In the July no. of the Cultivator, we called the attention of our farmers to the necessity of such improvement, and pointed out what we considered the most certain and ready means of effecting it. It may not be amiss here to recapitulate the positions taken by us in that paper, as circumstances have given it an importance and influence little anticipated at the time of writing.

In the first place, the advocates of improvement were considered as divided into three classes: those who propose substituting an entire stock of pure blood animals for those at present existing; those who maintain that we have in our native breeds all the materials for improvement, and that a recurrence to foreign blood is unnecessary; and those who are in favor of selecting choice and high bred foreign stock, and crossing them with our best native animals, keeping in view the points or qualities we are most anxious to secure and perpetuate. To this last course we gave a decided preference, and proceeded to show the best methods of carrying out the course preferred by us. In doing this, we made a rapid survey of the principal improved breeds, and gave a preference to the Short Horns as the breed most highly improved, the one in which the good qualities could be considered as most permanently fixed, and therefore the one to be selected for the purpose of improving our native stock by skillful crossing and breeding. Taking it for granted that no one breed of animals is absolutely perfect or incapable of further improvement, and that all animals of even the best breeds are not uniform in their desirable points or qualities, we proceeded to state some rules in selecting the animals to be used in breeding. And first, we recommended that a pure bred bull derived from a breed, or particular family of a breed, possessing in a most marked manner the qualities desired, whether aptitude to fatten, deep milking, excellence in the yoke, kind handling, &c. &c. should be secured; and secondly, that the best native cows, selected with reference to the same desired qualities, be crossed with the bull so chosen. We showed why breeders had so frequently suffered disappointments, and traced the difficulty to breeding from half blood bulls, when the true course would be, if the progeny of a cross between a pure blood bull and a native cow was a bull calf, to fit him for the yoke or the shambles; if a heifer, to put her to a pure blood bull, and there would be a reasonable certainty of a good calf. By this constant recurrence to pure blood, the whole stock would be rising; by using half blood bulls, it would as certainly be sinking. Proceeding in this way, using full blood bulls and the best native cows, we argued that the way was prepared for an advance on any of the present improved breeds; or, in other words, that a breed might be produced more valuable to the American farmer, and combining more of the qualities desirable in a stock for his use, than any of the foreign ones. Basing our statement on the fact that no breed is absolutely perfect or incapable of further advance, and aware that improvement has been made in the way before pointed out, we affirmed the *possibility* of improving one breed, by a cross with another one, decidedly inferior as a *whole* to the one improved, and we adduced a suppositious case to show that there was such a possibility. As this position of ours has been most strangely mistaken, and our meaning most strangely perverted, to use a very mild expression, we shall be pardoned if we define it in this place more fully.

In looking over the history of improvement in animals by breeding, and in no country has this been carried to such perfection as in England, it appears evident that the first step was to select the best breed, and the best animals of this breed, and then in whatever point or quality they were deficient, to supply this deficiency by crosses with animals possessing the desired form, point or quality in a remarkable degree. Such it is clear was the course pursued by Collings, Berry, Bakewell, Ellman, &c. &c. If an animal possessed the requisite quality in a great degree, and particularly if it was one permanent and constitutional in the race, that animal was selected to impart the desired quality to the improved breed, even were it inferior in some respects to the one to be improved. It is true there was a risk in the operation; it is true that but a portion of the progeny might possess the desired quality, and it is possible the other portion might be poorer than either, but what cared the breeder for that? He had gained his object; he had secured in his breed the desired quality, and by breeding from those that possessed it, and not from those that had it not, it became fixed and permanent. It is true, skill and judgment were required, and without these no man need expect success in breeding. We are aware that another canon of breeding has been laid down, which is, "if an animal be deficient in any one point or more, it must be crossed by another animal *equal* to it in all its *good* points, and *superior* to it in all its *deficient* ones." To show the unsoundness of this, we have only to refer to facts. Mr. Colling resorted to the Galloway cross to give vigor and constitution to his Short Horns, impaired by in-and-in breeding, and the result was a most happy and successful one. In this case, was the Short Horn breed equal to the Galloway in the point of constitution? It was certainly superior in others, and if equal in this, where the benefit of a cross? The truth is, to secure a particular quality, Mr. Collings crossed his Short Horns with a breed inferior in every respect, a single point or quality excepted, to his fine animals, and every breeder knows with certain and eminent success. Mr. Berry found that too much attention had been paid to the form and fattening qualities of his fine stock of Short Horns, and that their milking qualities had been neglected. Desirous to reimpart to his herd this quality, what did he do? He chose a bull from a family superior in milking properties to his own, but inferior in other respects, as a comparison of the portrait of his bull with that of Lord Althorpe, in Youatt, will show, and soon found that without deteriorating his original stock in the least, he had added to their qualities, by a cross with an animal on the whole inferior to his own, that of being excellent milkers. These instances, and such are not confined to cattle, are sufficient, we think, to demonstrate the *possibility* of improving a breed of animals by a cross with another inferior in many respects. We have never advised our breeders to crosses with the native stock, with an idea or purpose of improving the pure Short Horns, although they have been improved by a cross with native stock, or history is but a fable. We know the risk attendant on such a process too well to advise any to incur it needlessly, and we leave such an absurdity with those who coined it. Our object has been to urge upon our farmers the importance of improving their stock of native animals by crosses with pure bloods, never using part blood males, and always recurring, after a single cross, to pure blood; and we hope no idle clamor about "*scrubs*" and "*dunghills*," or charges of enmity to the Short Horns or other improved breeds, or false issues as to the ends we aim at, in urging this subject of the improvement of domestic stock, will prevent our farmers from going steadily forward in the work which the exhibitions of 1843 prove has been so successfully commenced.

Of one thing we are certain: if the Short Horns or other improved breeds have enemies, they will be multiplied a thousand fold by the injudicious course of some who profess to be their friends, *par excellence*, are pursuing. The results of these indiscriminate attacks on our native animals, and the dignified appellations so liberally bestowed on the animals themselves and those who venture to think our native breeds possess some excellences that may be turned to good account in connection with pure blood animals, are beginning to be felt, in a reaction of the public mind that cannot fail to be injurious to the cause of improvement. Well may the breeders of pure blood animals exclaim, "If these men claim to be our friends, heaven save us from our friends!" We desire to see in every neighborhood of farmers a pure blood bull of some of the improved breeds, the one that shall be the best adapted to the wants or wishes of that particular place; and with our knowledge of these breeds, we doubt not that in a great majority of cases, the choice should fall on the Short Horns. Let not the breeders of pure blood Short Horns, Herefords, Devons or Ayrshires be disheartened. Public opinion is becoming enlightened; the true value of pure blood in improving our native herds is being better understood and appreciated. The times, that have been so long "out of joint," are becoming better, and the prospects of the farmer and breeder are, as a matter of course, brightening.

FRENCH AND BELGIAN FARMING.

We find in Mr. Weed's letters, the following account of the manner in which a French harvest is gathered. Such notices, by contrast, show most forcibly the wide difference existing between modern and ancient husbandry.

"A farmer of Western New-York, who dashes into his hundred acre wheat field with a force sufficient to cut, rake, bind, and thresh it, in two or three days, would be infinitely amused with the primitive mode of harvesting in France. Here the wheat is all cut with the sickle, and then bound by women, who place the sheaves in a sort of scraggy rack upon the back of donkeys that move along behind the reapers. When the donkey gets loaded, (some eight or ten small sheaves in each of his wooden saddle bags,) he is marched off to the road, where the wheat is transferred to a clumsy wagon, and drawn lazily hence by three French ponies, tandem, to the granary! In this way, a dozen people consume a day in harvesting an acre. Two-thirds of the people I saw at work in the fields, were women."

As a contrast to the foregoing, we present the following from a letter written by a correspondent of the "Tribune." It shows conclusively the advantages of an improved husbandry:

"The country between Ostend and Bruges is, like nearly all Belgium, a perfect paradise for farmers. It is as level as a floor, and is most laboriously cultivated, till every inch of ground is compelled to produce its utmost. It is one vast garden, and the tulips of the Dutch fanciers do not receive more unceasing attention and nursing, than the turneps and cabbages of the Belgian farmers. The fields are covered with men and women, digging and weeding, and well they may, for in one district (St. Nicholas,) there are 5210 inhabitants to every square league. The superficial farmers of America, who imperfectly turn up the soil of a thousand acres, might take a profitable lesson from the care and skill which here enables every acre to support more than its man."

THE BEST COUNTRY FOR SHEEP.

The question as to the best part of the United States for sheep husbandry, and the growth of wool, appears of late to have elicited considerable attention, and very different sections of the country have claimed the preference in this respect. That sheep will succeed in nearly every part, is doubtless true; but when we take into view the difference in soil and climate, it is scarcely possible that some parts should not be better adapted to the production of wool, or furnish it at less cost than others. It has been generally supposed that warm climates were not suited to the growth of the finer wools, however favorable they might be for the sheep itself; but from the experiments that have been made in the southwestern states, in the case of the Merino and Saxon, it would seem that this supposition was erroneous, at least so far as the interior of these states is concerned.

Maine, Vermont, the south of New-York and the north of Pennsylvania, Ohio, Illinois, Wiskonsan, Iowa, and Tennessee, have respectively claimed the distinction of the best sheep and wool districts; a fact in itself sufficient to show there can be no reasonable limit to the production of wool in a country where it can profitably be grown over so large a surface. Still later than the claims put forth by the states and territories abovenamed, there appears in the Louisville Journal, an able and elaborate paper from the pen of Judge Beatty of Kentucky, on this subject, in which a great mass of evidence is adduced, from the testimony of gentlemen on the spot, to show that the western part of Virginia and the eastern part of Kentucky, or the whole region occupied by the slopes and vallies of the Cumberland ranges, are excellently adapted to sheep culture. The cheapness of the lands, only from five to ten dollars per hundred acres; the fine water, and elevated airy nature of the district, insuring the health of the animal; the ready formation of excellent blue grass and other pastures, and the shortness of the time in which it is generally necessary to furnish animals a trifle of food in the winter, generally from five to eight weeks, are certainly circumstances much in favor of the position taken by the Judge. There are, however, some counteracting causes, such as the descent of wolves occasionally from the mountains, and the presence of poison laurel and ivy, killing sheep that eat them; but as the wolves are mostly exterminated, and sheep accustomed to such plants will never feed upon them, he considers these objections as of little consequence on the whole.

The claims of Wiskonsan and Iowa are founded on the fact of the immense natural pastures already existing, furnishing abundance of food for both summer and winter, and at present costing absolutely nothing; while wool is one of those articles that costs less in transportation, in proportion to its actual value, than almost any other article, thus enabling the wool grower of Wiskonsan or Illinois, to offer it at the Lowell Factories at rates but little higher than those of Vermont or New-York. We do not think, however, that the great question as to the effect which prairie lands, particularly what are called the wet prairies, will have on the health of sheep, as sufficiently settled by experience to determine the value of these lands for sheep culture. Level, wet lands, or even those not wet, have not in general been found as suitable for sheep as drier, or more hilly ones. In Europe, it is in such districts, or where low meadows abound, that the foot rot makes such ravages in flocks, and where the disease has shown itself in this country, such districts or tracts have been found to aggravate it. If on the contrary, it should be found that sheep on the prairies do not suffer from foot rot, and those complaints that usually appear where sheep are kept in large numbers, it seems to us that Wiskonsan and Iowa hold out great inducements to the wool grower.

Although on all grain farms more or less sheep are necessary, it can scarcely be expected that the best grain districts of the Union will leave the production of wheat and corn for that of wool. And admitting that wool does not deteriorate at the south, we cannot expect the cotton planter to forsake cotton culture for wool growing. The genius of their institutions forbid it. That the wool business of this country is destined to exercise an important influence on our agricultural destiny, is certain; the two hundred millions of dollars now invested in its production, will in a few years be doubled, and every thing relating to such an interest cannot be otherwise than important. We are glad the discussion of this matter, as to the best wool growing district has arisen; it will be the means of eliciting facts and establishing truths, especially if the investigations should be conducted by others as they have been by Judge Beatty.

STUMP MACHINE.

In our Oct. no. we published a drawing and description of a stump machine, about which our correspondent, "M. A." wishes further explanation. He says:—"Will H. T. C. tell us how that frame, constructed as it is, can sustain such a huge wheel and axle, with nothing to support it from swaying over to the right or left, but the ends of the axle passing through the upright posts, with pins driven through the gudgeons to keep the posts to their places? What if one end of the axle should be, by the make of the ground or from some other cause, a little more elevated than the other? Would not the chain draw perpendicularly, or incline to, and when the power is applied to the wheel, in an instant crush the whole machine to the ground? Or again: how is this ponderous machine to be moved by teams, with nothing to keep it to its proper position but those two round tennons, some ten feet from the ground? How quick the post is split and the bearing of the gudgeon is destroyed, if one team should start a little too soon for the other upon the opposite 'sill.' Messrs. Editors, I hope H. T. C. will be able to explain these difficulties, which I find in his stump machine. When he says that for fifteen years it has been in constant requisition, I conclude there must be something about the drawing or description which I do not understand."

PLOWING IN CORN FOR MANURE.

We find in the Louisville Journal of October 25th, an excellent article by a correspondent on the subject of manuring land, by sowing corn broadcast and plowing it under, as a green dressing. It is only one of the many instances which have come to our notice the present year, in which sowing corn has been experimented upon, and in every instance with marked success.

In the case recorded in the Journal, the field contained 37 acres, and the year before had been in corn, and previous to being sown, had not been broken up, and the old stalks still remained on the ground. The latter part of April, 30 acres were sown with corn, at the rate of two bushels to the acre, and 7 acres at the rate of three bushels per acre. The whole, old stalks and all, was covered by the plow about two inches deep. It came up and grew equally until about two feet high, when a difference began to appear, and at maturity the thick sown was but five feet high, while that sown thin was seven or eight. The writer is decidedly of the opinion that two bushels or even less is a sufficient supply of seed per acre. To turn the corn under, a heavy roller was used, which pressing and mashing the corn close to the earth, and in one direction, enables the plow to cover it perfectly. In this way, stalks ten or twelve feet high may be crushed down and turned under without difficulty. The writer adds:

"Were my only object the rapid improvement of my soil within the shortest space of time, I would not seek further or better means than first sowing down thick with rye, which I would plow under just before the time of ripening, to prevent its seeding the ground, and upon which I would sow one bushel and a half of corn per acre; thus in the same season plowing under a heavy coat of rye and corn, which, in the short space of twelve months, will equal if not surpass any benefit which can be derived from clover in two years."

THE HERD BOOK.

We have been favored by E. P. Prentice, Esq. Mount Hope, with a copy of the new and long expected vol. (the 4th) of this work. It is an octavo volume of over 800 pages, and is devoted exclusively to the pedigrees of Bulls, numbering from 2898 to 6699. Among them are 130 bulls bred in this country, by Messrs. Prentice, Rotch, Bement, Van Rensselaers, Sherwood, Randall, Lennox, Hollis, and Gregory, of this state—Messrs. Rodman, Derby, Lathrop, Silsby, and Williams, of Mass.—Messrs. Bartlett, Collins, Hudson, Pasco, Phelps, Colton, Watson, and Whitney of Conn.—Messrs. Brinton, Burton, Cope, Morris, and Powell of Pa.—Messrs. Clay, Gano, Majoiy, Martin, and Taylor of Ky.—Messrs. Mahard, M'Ilvaine, Sullivant, Warfield, and the Ohio Company of Ohio. A fifth vol. of the Herd Book is now in press, to be devoted exclusively to females.

P. S. A few copies of the fourth vol. have been sent us for sale. The cost, including duties, delivered here, is $7,50.

IMPROVED RAIL FENCE.

Extract of a letter from Henry Weston, Rensselaer, Indiana:

"I observed in your no. for October a communication from S. E. T. and a figure (79,) of a rail fence, which I intended to bring to your notice. I have had it in use for two years, and can speak experimentally of its qualities. It has not required the additional rider he suggests, nor have I even driven the stakes, though that is proper. It is more solid and firm, is more easily put up, occupies four feet less ground, is more readily removed or opened for gaps, and any thing will answer for stakes, the chief object being to hold the riders to their places. I have for this purpose tossed in mere limbs of trees, letting them fall into the angles formed by the top rail and the rider. The crossing of the stakes at bottom fills the angle of the fence that would otherwise permit the passage of unruly sheep or hogs. In a word, it is perfectly formidable."

☞ The Genesee County Agricultural Society, seems to be going ahead finely—the last Fair, holden on the 4th and 5th of October, showing 367 animals offered for premiums—one hundred articles of domestic manufacture, &c. An able address was delivered by T. C. Peters, Esq.

In seasons of distress, the mind recovers itself by taking hold first of one hope and then of another, until all its functions are restored; and it feels once more, that there is pleasure in looking forward and anticipating the light and warmth of to-morrow's sun.

The range of earthly good is narrow and soon trodden; after a short time there is no variety, and the enjoyment is without hope.

PROGRESS OF SOUTHERN AGRICULTURE.

ONE of the most gratifying signs of the times, and one which as clearly, perhaps, as any one thing, marks the advance of sound opinions on the subject of farming in the country generally, is the evident improvement which has taken place within a few years in the method of southern farming. Formerly there was no rotation, no change. The leading crop, whether tobacco or cotton, was repeated until the soil was exhausted, and a long time was required for nature to restore its productive powers, an operation in which it was left entirely unassisted. All the reliance of the planter was on this single crop; with it he paid the debts previously contracted; with this crop he purchased his clothing and a large part of his provisions, and on it he depended for the supply of the many luxuries which habit had rendered necessary. If, as was sometimes the case, the leading crop did not succeed; if his rice, tobacco or cotton failed, he had no others to fall back upon, his resources at once fell short, and some privation was the necessary result. Sacrifices of some kind became necessary, and where these were not submitted to, vexatious debts, weighing like an incubus on the prosperity of the planter, were of course contracted.

In a very large portion of the south, a better state of things is beginning to prevail. It is true the crops we have named are still the staple ones, those that are relied upon for sale or export, and they will doubtless continue to be so. But while this is the case, the agriculture of the south is becoming more mixed; the whole labor is not put upon an article for sale; the culture of wheat and other grain, and the growing of cattle and hogs, receive a considerable portion of the industry and capital of the planter, and the results are of the happiest nature. This mixed husbandry has induced the planter to pay more attention to the rotation or change of crops, and the preparation and use of manures; and while it is believed there has been no material falling off in any of the principal products, there has certainly been a vast increase of those that formerly were wholly neglected, or considered only of minor importance. The number of those who grow their own wheat, corn and oats—who make their own beef, pork and mutton, has increased at a rapid rate; and as a natural result, millions of dollars that annually went from the south to purchase these and similar articles, are now retained at home.

These things, however, must be considered as but the beginning of a better husbandry in the fertile south; as only examples of what may, and will hereafter become general. New plants, new implements of husbandry, new methods of culture, new and improved breeds of animals, will gradually take the place of the old; and the only wonder will in a few years be, that such barbarous agriculture could ever have been tolerated. There will be some failures in these efforts at improvement, there can be no doubt. Mistakes will be made as to soils, methods and adaptation, but these very failures will aid the general advancement; they will show the things to be avoided, as the wreck of a ship sometimes points out to fleets that follow, the shoals that are to be shunned in their course.

That the cultivators at the south are producing far better crops of grain than heretofore, is evident to all familiar with the history of their products—crops which five years since would have been pronounced incredible. For instance, in South Carolina, where a short time since a correspondent of an agricultural journal declared no man had ever seen 75 bushels of corn raised on an acre, and that the man was unreasonable who was not content with 25 bushels per acre, more than 75 bushels to the acre have been raised the past season, the result of intelligent and skillful farming. The following statement respecting a wheat crop in Maryland, raised by a gentleman of Queen Annes county, which we find in the Maryland Telescope, will show how wheat may be grown at the south; and we may add, in Virginia, the Carolinas, Georgia and Alabama, fine crops of wheat have rewarded the labors of the intelligent farmer the past season:

"Our respected fellow citizen, W. Carmichael, Esq., raised this year upon 20 acres of land, ONE THOUSAND AND TWENTY-SIX bushels of Mediterranean wheat, being a fraction below 51½ bushels per acre, averaging 60 lbs. to the bushel. This is a very great yield, larger, we believe, than was ever made before on this shore, and we question whether the state can beat it. This shows what good farming can accomplish. The land on which this wheat was raised is not better wheat land than two-thirds of this county, but has been greatly improved by the use of marl and marsh mud."

We question whether the United States can show a better 20 acres than Mr. Carmichael, and the secret of his success is to be found mainly in his improved culture, in his "*marl and marsh mud.*" In the former volumes of the Cultivator, we have recorded an instance, among many others, in which *pond mud* spread on an exhausted soil, gave about 20 bushels of corn per acre over the same quality of soil not so treated; yet even now in every part of the Union, these elements of fertility, marl and mud, are in immense quantities lying neglected, in the immediate vicinity of places where they are the most wanted.

So, too, in districts where the planters depended on the importations of pigs from Tennessee or Kentucky, for the making of their bacon, droves of the finest porkers, in numbers nearly adequate to the wants of the inhabitants, are now annually bred; and the same remarks will in a good degree apply to the supply of a stock of cattle for domestic use. Animals of the best breeds have been introduced; and the feeling that the planter should in these matters depend more on himself, is producing wonders in their spread. In Virginia, where but a few years since sheep were objects of such detestation that one of her most eminent statesmen declared he "would go twenty rods out of his way at any time to kick a sheep," fine flocks of these animals are now to be found; and some of the finest samples of wool we have seen, were from sheep grown in Mississippi, thus refuting the prevalent notion that such climates are unfit for the production of fine wool.

We repeat that we hail these things as indications of a far better day for the southern agriculturist than he has yet seen; more permanent and enduring, because based on the sure foundations of rational improvement, and the spread of intelligence. The single crop culture has been fatal at the south, as it must be every where; and the adoption of a better system, one which increases the chances of success, and lessens those of failure, must be considered as one of the most favorable indications in the horizon of American agriculture.

ERGOT.

WRITING of the investigation which has been going on in the Cultivator as to the causes of abortion in cows, a correspondent says:—"I perceive that some attribute this difficulty to *ergot*. Now many of your readers do not know what ergot is, or where produced; will you be so good as to tell us what is meant by the article, and on what plants we are to look for it?"

The substance called *ergot* is also known by the name of *Secale cornutum, spurred rye,* &c., and is occasionally found on many of the cereal grains and grasses, but most commonly on rye. There appears to be no little discordance among botanists and vegetable physiologists as to the cause of this disease of seeds. Some attribute it to the puncture of insects, some to an altered condition of the pistil, and some consider it a fungus. Decandolle calls it a fungus, the *Scelerotium clavus;* Endlicher does not admit it as a real fungus, but considers it a diseased state of the seeds, generated by a particular combination of external influences. During the formation of the seed of rye, in which it most commonly appears, some of the ears will be found to contain seeds greatly enlarged and elongated, gradually protruding from the chaff, with a whitish or greenish color at first, but becoming brown or black on exposure to the air. The interior is a light gray. It sometimes grows to the length of two inches, warps and curves like a horn; hence the name of *cornutum.* When fresh, these horns are tough, but become hard and brittle in drying, and in time it loses the nauseous, acrid taste and peculiar smell which indicates its fungous origin. Its active properties are supposed to reside in an extractive substance, called by Wiggers *ergotine.* Wildenow asserts that ergot may be produced on rye at any time, by sowing it in a rich, damp soil, and watering the plants freely in warm weather.

Ergot is found on some of the grasses, and perhaps occasionally appears on all. We have seen meadows in which June grass (*Poa pratensis,*) abounded, which were sensibly discolored, when the grass stood until ripe, by the immense number of the black horns that covered almost every head; and when such hay was threshed on a floor, (a precaution deemed necessary to prevent its apprehended effect on the young cattle to which it was to be fed,) the ergot might be scraped up by quarts. We have also found it occasionally, but rarely, on cat's tail or timothy, (*Phleum pratense.*) and last season we for the first time saw it growing on spring wheat. This spring wheat had been sown where winter wheat had been killed out, and among it occasional stalks of rye were to be found loaded with most magnificent horns or spurs of ergot. When the spurs are large, there are but few to the ear, but sometimes the character of nearly every kernel will be changed, and the seeds, though but little enlarged, possess all the nature or properties of true ergot. It is when it assumes this form that it produces the dreadful effects, described by medical writers as at times exhibited in Germany and Hungary on the poor, who are driven by want to use rye containing more or less of this fungus for bread. The mildest form of these effects is a nervous derangement of the system; the most severe nausea, vomiting, convulsions, frequently terminating in death, or when not immediately fatal, ending in *dry gangrene* or mortification, during which the feet and fingers swell and fall off by a slow but certain decay. The effects of ergot, used as a medicine, it is unnecessary to refer to in this place.

If eaten by cattle, we have no doubt it would exhibit its effects in some marked form. That it has produced hoof ail or gangrene in cattle, we have not the slightest doubt; the evidence we have had on the subject forbids it. That it may produce abortion in cows, we also think probable, but in some of the cases mentioned in the Cultivator, it could not have been the active cause, as none of this substance could be detected in the hay used or in the fields. If, as is asserted by Wiggers, the white dust or bloom sometimes found on the surface of the spurs will produce it on other plants, if sprinkled on them or sown on the earth about their roots, it would be well to avoid the use of grain for seed in which this fungus is found, as its poisonous qualities render it a substance much to be dreaded, whether in grain or grass.

"SOUTHERN FRUITS."

UNDER this head, we find in that valuable journal the Southwestern Farmer, of Oct. 20, a defence of the climate and fruits of the south against an article which appeared in the Farmer's Monthly Visitor, and was noticed by us in the Cultivator. It related to the rapid growth and perfection of apples grown from northern trees, such as the Russet, Greening, Pippin, &c., when planted near Mobile, and the consequent rapid decay of the trees, rendering their renovation by new importations from the north necessary every few years. Our friend PHILIPS, from whose pen the defence proceeds, says to us, as editors of the Cultivator, "Now it matters not if the 'Farmer's Monthly Visitor' should have published it, and you merely, as you do, noticed it, but as there is enough expressed to show *you* why their life was fleeting, you should have said that they were suffered to overproduce themselves, thereby doing a palpable injury."

Now we can assure our worthy coadjutor in the cause of agriculture, that at the time of penning the article in question, the idea of overproduction never presented itself to our minds, the large profits indicating rather the demand for fine fruit than the actual quantity produced. Even now we see nothing that countenances the idea of overproduction, since at the north, overproduction and fruit of good quality, such as the Mobile apples certainly were, are generally incompatible or never occur together. We remembered, too, at the time, the remark of Mr. Kendrick in his Orchardist, that the apple would succeed in nearly every part of the United States, except the maratime districts of Carolina, Georgia and Florida, and those near the Gulf of Mexico, and considered the fact stated by the F. M. V. a proof of the correctness of the Orchardist. Indeed, we believe it to be a law in all parts of the world, certainly we have yet to learn the exception, that as the climate and temperature approach that state fit for the fig, orange and other tropical fruits, it becomes less suitable for those whose home is the temperate zone, such as the cherry, apple, pear, &c. That the peach should flourish in the extreme south, was to be expected from its origin and its habits; that it actually does so, we learned long ago from Mr. Darby, who assured us that he found excellent peaches in the western part of Louisiana, near the gulf.

We cannot but think our friend and correspondent is in this case a little too anxious to appropriate all the good things of the United States to the "sunny south," and his own particular part thereof. We grant them freely their cotton, sugar, rice, figs and oranges; and why may not we, in our "bleak and frozen north," enjoy our wheat, apples, cherries, quinces, pears and maple sugar? But if, after the experience which it is acknowledged the south has not had as yet, on the subject of fruits, owing to the neglect of planters generally, it shall be shown that the fruits usually considered as best adapted to the middle and northern states, shall succeed equally well or even better at the south, we shall rejoice at the fact, as it will furnish additional proof of the vast resources and capabilities of our extended and common country. And further, we can assure our southern "*brethren*" that the cry of "barrs" and "painters," which they say has been set up by some at the north, to prevent emigration or visits to the south, has had so little effect upon us, that we promise ourselves the pleasure at some future time, of taking them by the hand at their our own fireside, and receiving from them the cordial welcome with which they would be greeted should their wandering feet ever lead them to the shores of the Hudson.

CHINA PIGS—MERCER POTATOES.

"MESSRS. EDITORS—Can you inform me where I can obtain a pair of genuine China pigs? I should like extremely to obtain a pair this fall, for the purpose of crossing with a superior native breed now in my possession. I should also like to have you give a description of the Mercer potatoes; their form, color, &c., and whether the Chenangoes and Mercers are one and the same variety.
D. C. GOODALE.
Chimney Point, Vt."

As to the China pigs, we are unable to state where the genuine ones may be found. As they are too small for the farmer's hog, and as the Berkshire, while it was larger, possessed nearly all the good qualities of the former, it soon took the place of the China among breeders almost exclusively. If any of our friends have pure pigs of this breed, perhaps they would confer a favor by a notice in our columns.

The Mercers, Chenangoes, Neshannocks and Philadelphia potatoes, are, as appears from a paper published in the "Educator," and copied into the Farmer's Cabinet, vol. 4th, page 64, one and the same. From that paper, it seems the true name should be the Gilkie, as it originated from seed sown by John Gilky on the bank of the Neshannock creek, about five miles above its junction with the Chenango at Newcastle. The first was produced nearly forty years since, and it has thence spread over nearly the whole United States. The Mercer is in shape much like the long pinkeye, but generally larger and longer. It is slightly tinged of a reddish or purple color, and when cut, streaks of the same color are found running through it When cooked, these mostly disappear. It is one of the most valuable of table potatoes, white, mealy, and of good flavor.

Manure is to a farm what food is to an animal.

DICTIONARY OF TERMS USED IN Agriculture and its kindred Sciences.

MOON.—The moon is a well known body in the heavens, revolving around the earth, at a medium distance of 237,000 miles. There are few of the heavenly bodies that have more superstitions connected with them, and many of these are connected with agriculture. That the moon exerts an influence as far as the earth, is proved by the action of the tides; that it can have any perceptible influence on vegetation or the products of agriculture, few well informed persons at the present day believe. Formerly much attention was paid to the age of the moon in sowing and planting, killing meat, &c. &c., but there are now very few who pay any notice to that body in their farming operations, but plow and sow, kill and eat, as though no moon existed. It has been found that the earth is the place for the business of the farmer, and that the less he has to do with all foreign bodies the better; that a proper condition of the soil, manuring and tilling, has more effect in securing a good crop than any moon sowing can do; and that pork well fed on corn will make good bacon or pork not liable to shrink in the pot, no matter what might have been the age of the moon at killing. The following will serve as a specimen of some of the notions formerly entertained; it is from Tusser's Five Hundred Points of Good Husbandry:

> " Sowe peason and beans in the wane of the moon,
> Who soweth them sooner, he soweth too soon;
> That they with the planet may rest and rise,
> And flourish with bearing most plentiful wise."

MOSS.—Mosses are minute plants, never more than a few inches in height, and frequently merely discernible as a slight green stain, yet exercising no little influence on soils, and frequently, by their presence, indicating its peculiar qualities. Mosses are the first plants that spring up in inorganic matter, and earth dug from great depths and kept in closed glass vessels, is soon covered with them. Where mosses abound on the surface they usually indicate a damp soil, and on meadows that are wet, they frequently become so close as to choke, if not to obliterate the more valuable grasses. Mosses are usually the cause of bogs and morasses, or rather occupy such when formed. They retard the passage of water; new growths are continually taking the place of that which is decaying; trees of considerable size are soon enveloped, and the constantly increasing mass of vegetable matter becomes what is called a moss, or in other places a peat bog. Thorough draining is the most effectual and speedy cure for mossy lands. When made dry, quick lime, or even common sand and gravel mixed with the surface matter, will soon fit it for crops, and the mosses cease to grow at once. Where lands can be submitted to its action, the plow is a sure remedy for moss; where it cannot, and the grasses are becoming injured, a thorough harrowing and re-seeding, with a dressing of lime or ashes, we have known operate favorably. These beds of peat or moss, are good ingredients in making compost, using about one load of stable manure to two loads of decayed vegetable matter, and allowing the whole to ferment together.

MOLD.—This is the name given to those minute fungi or plants, which as parasites appear in masses upon organic bodies. They appear to be favored in their production and growth, by a damp atmosphere, and perhaps by a diminution of light; consequently the appearance of mold is more common in wet cloudy weather, and in damp dark cellars or caverns, than in other times and places. There are many vegetable productions it attacks and greatly injures; and living animals, as in the case of the silkworm, are sometimes attacked and destroyed by these fungi The celebrated Stilton cheeses, and those produced in Switzerland, owe their peculiar flavor to a kind of mold; and when it does not seem disposed to attack all the cheeses of a dairy, those that would remain free, are inoculated by inserting pieces from cheeses where it has already devolped itself. Perfect dryness, or absence of all moisture, is incompatible with the growth of mold.

MOW-BURNT.—When hay not properly cured is packed in large masses in stacks, or more frequently in close bays or barns, a fermentation or heating takes place, which at times progresses so far as to give the hay a black or charred appearance, and entirely destroys its value as food for animals. If moisture was present, or was furnished in sufficient quantities in these cases, the fermentation would end in the conversion of the hay into muck or manure; but as it is not, the hay suffers as from a dry or smothered heat, equally fatal to its nutritive properties. Hay so injured is termed mow-burnt, and can never be useful as fodder. We have seen in a barn where a large mow of clover hay, put in too green, was closely packed away, the whole central part of some ten or fifteen feet in diameter, black, brittle, and apparently as effectually charred, as if the conversion had taken place in a coalpit, and wood instead of clover had been the material employed. But there is a vast deal of hay where the heat is not so great, and where it is only black, moldy, or discolored, and such hay is frequently fed to horses or cattle. This is wretched policy; as they not only starve on such food, but contract diseases that are not unfrequently fatal, from being compelled to eat it. It is not too much to say that one-half of the clover hay made in the country, is put up without being sufficiently cured, and becomes moldy or mow-burnt in consequence. The only use which such hay is fit for, is to litter yards, and by absorbing, prevent the escape of the fluid manures.

MULBERRY.—The mulberry is a well known tree, (one not likely to be soon forgotten by many in the United States,) some varieties of which, the black particularly, are cultivated for fruit, but more generally the tree is grown for the sake of its leaves, which are used for feeding silkworms, wherever that article is produced. Of the kinds cultivated for the sake of the leaves, the white has been the most common; but within a few years other varieties of quicker growth and more abundant foliage have been introduced, which have in a measure superseded the first kinds. One of the kinds most valued at the present time, is the Chinese mulberry, or the *Morus multicaulis;* the growth of which is very rapid, and the facilities for propogating which by means of cuttings or layers, and the great mass of foliage produced, has rendered it a great favorite with silk growers. This tree in its introduction and spread in this country, affords one of the most instructive lessons, as to the extent to which speculation may spread, and the actual monomania it may produce, to be found in the history of any people. The whole nation was to become rich by growing mulberry trees, and thousands invested their last dollar in purchasing trees at the rate of 75 to 100 dollars per hundred, trees of only one year's growth; and in many instances they were sold at from 10 to 50 cents per bud, making the prices truly enormous. This was done in the full certainty that the tree had no value except for silk, and that the preparations for the production of silk, bore not the least proportion to the increase of the mulberry. As was foreseen by every reflecting mind, the supply soon exceeded the demand, or rather there was no demand whatever; the mulberry bubble burst, and its disappearance involved the ruin of thousands. For silk, the mulberry is invaluable, and as the silk culture will eventually become important, as experience teaches the best processes, so its introduction to the country, may be considered as an important contribution to its resources. The mulberry may be multiplied by the root, by cuttings, or by layers, and one of the easiest methods of feeding it to the silkworm, is found to be to mow the shoots close to the ground annually, and give the foliage to the worm in that form. Where mulberries are kept for fruit, the pruning should be done at midwinter, as summer pruning is found to be injurious to this tree. It will be better too, to take layers or cuttings from trees known to produce fruit, where trees for fruit are wanted, as when grown from seeds, a considerable portion will be always barren, or unproductive of fruit.

MULE.—This is the name generally given to the offspring produced by the sexual union of the jackass and the mare; an animal capable of copulation, but not of begetting or producing offspring. Instances are on record, however, in which hibrids, or animals resulting from a cross of distinct species, have produced offspring, but in the opinion of Hunter, they were the result of monstrosities, and only formed the exceptions to the general rule. The mule proper, possesses many excellent qualities, and is of singular utility as a beast for labor, in countries where the horse is of little value. Mr. Darwin, in his "Narrative of the Surveying voyages of H. M. ships Adventure and Beagle," in the notes of the journey across the Cordilleras, thus speaks of the mule, after giving some curious proofs of its sagacity and value as a beast of burden: "The mule always appears to me a most surprising animal. That a hybrid should possess more reason, memory, obstinacy, social affection, and powers of muscular endurance than either of its parents, seems to indicate that art here, has out-mastered nature." Mules or hybrids among plants, are confined within narrow limits, though as in the case of animals, they do sometimes occur. Thus hybrids sometimes show themselves among strawberries, and some of the best kinds are supposed to have such an origin. Where, however, they appear among plants of the same species, it would be as well perhaps to consider them a mere cross, and not as a proper hybrid. Mr. Knight could never make the Morello breed with the common cherry, and Prof. Lindley has in vain endeavored to mule the currant and gooseberry; and it is well known we have no fruit produced between the apple and the pear, or the blackberry with the raspberry. Mr. Herbert gives some curious instances of mules obtained between plants of distinct genera, as crossing the pea with the bean, the cabbage with the horse radish, &c. But though muling of plants may be difficult, cross breeding is easy, and to this fact may be traced the great number of varieties exisiting of any one species of fruit. The difficulty of muling, and the inability of hybrids to perpetuate their race, appears to be the result of a wise law of nature, intended to preserve identity of races, and prevent the universal mixing and confusion which would otherwise have resulted from a confounding or loss of individual species.

MURRAIN.—A disease among cattle, generally considered contagious, and where it appears, is usually fatal. There can be no doubt that many diseases widely different from each other, have received the name of murrain; but the disease itself is marked with a greater variety than almost any other, assuming so malignant a form. There is usually a cough perhaps a week before any other symptom appears, then heaving of the flanks, with black and fœtid fæces, tenderness over the loins, and coldness of the horn, tumors and boils appear, and if the animal has strength to allow these to suppurate and heal, there is a chance of recovery; but if they become stationary, or disappear, death is the result. In the murrain of this country, there is usually discharges of blood or bloody matter, with a holding down of the head, moaning, restlessness, and staggering when attempting to walk. Bleeding has been recommended in the first stages; while the peculiar diarrhea that accompanies it, must be met by astringents and tonics. A wash of chloride of lime is good for the ulcers, but when these assume the gangreneous form, decomposition takes place so rapidly that there is little hope for curative efforts, and indeed they produce little effect. In some instances where murrain has appeared at the west, herds of cattle have been saved, by keeping a trough containing a mixture of lime and salt, one-third of the former to two of the latter, where the animals could have free access to them. The terrible epidemics which at different times from the earliest ages, have ravished the old world, destroying in many cases, almost the entire stock of cattle, are supposed to have been the murrain, or some of its kindred diseases. It has always been remarked that the murrain makes its appearance on wet farms oftener than on dry ones, and that hot dry seasons are the ones in which it most prevails.

MUSCLE.—Muscle constitutes the most nutritive and valuable part of animal food. It is an aggregate of small contractile fibres, which appear to be formed of minute globules, and partially formed as it were in bundles. What is called lean meat is muscle, and on the quality and disposition of this, much of the value of animals is depending. The best kinds of beef and mutton are those in which the lean and fat are mixed, or marbled; if the fat and the lean are too distinct from each other, it is a decided fault. The condition of the muscle is much influenced by the health of the animal, and though too little attention is paid to this matter generally, animal food from unsound animals is most deleterious to the human constitution. Selling diseased meat in the markets, is a crime that deserves the severest condemnation.

MUSEUM.—The attention of the public has of late been drawn to the necessity, and to the benefit of agricultural museums, or places in which all the valuable and all the curious productions of the soil might be represented by specimens as far as possible. Not only the products of the soil, but samples of the soil itself, where it has been distinguished for any remarkable qualities or crops, or can be considered a fair specimen of any peculiar class. Geological specimens are not out of place in a museum of this kind, as illustrating the position of strata, their character, and their influence in the formation of soils. Implements of all kinds, seeds, specimens of timber, plants, &c. grains, portraits of animals illustrating the different breeds, &c. &c. should be found in a museum, in short every thing that can enlighten and instruct the farmer, and advance the progress of agriculture, will find its appropriate place in such a collection. We trust the collection of the National Institute at Washington, will ere long become a Museum to which we as Americans can refer with pride and pleasure, and gratifying beginnings have been made in other quarters, particularly by the State Agricultural Society of New-York.

MUSHROOM.—Puff balls, toad stools, &c., belong to the same class of plants that produces the edible mushroom; and as some of these fungi are very poisonous, and liable to be mistaken for the true article, too much caution cannot be exercised by mushroom eaters in the choice of those to be used. The following description by Prof. Johnston, will aid the inexperienced in coming to a correct decision: "The edible mushroom (*Agaricus campestris,*) is nearly inoderous, but its flavor is grateful. The crown is at first hemispherical, then convex, and at last flat; fleshy; from two to five inches broad; white or very light brown; scales soft and fibrous; gills pink, changing to fuscous black; the flesh when divided usually changes to a reddish hue." It is a natural product of decomposing matter, but large quantities are produced artificially, in beds prepared for the purpose, into which the seed, or spawn as it is termed, is introduced and germinated by moisture and heat. For the method of culture, reference must be had to works on gardening.

MUTTON.—Mutton is the flesh of sheep; and perhaps in no one point has the skill of the breeder of animals been more marked, than in that of producing breeds of sheep, in which the greatest amount of flesh, and the smallest quantity of offal, seems to have reached a point beyond which progress will be difficult. The quality of mutton is greatly depending on the age of the animal, and the mode of feeding. Its general use in England, has caused great attention to producing it of a superior quality, and the success has been unrivaled elsewhere. To be first rate mutton, the sheep should not be less than five years old, and as a general rule it may be said the older the mutton the finer the flavor, in this respect differing from most other meats. The flesh of mutton five or six years old will be firm, dark colored, and when cooked full of the richest gravy, while at two or three, the flesh will be comparatively light colored, and be soft or flabby. As a general rule wether mutton is superior to that of ewes of the same age, though connoisseurs in this flesh assert that a maiden or spayed ewe of five years old, produces mutton preferable to any other. The South Downs are highly prized for mutton, and their reputation in this respect abroad, has been well sustained here.

MYRTLE WAX.—This is the product of the bush called the candleberry myrtle, or bayberry bush, and is found in most parts of the United States. It is produced on the seeds of the plants, and is collected by gathering them, and boiling them in water. The size of the shrub varies from four to eighteen feet, according to the climate. The wax is used in various diseases as a valuable medicine, but its principal use is to mix with tallow, and other animal oils, in the formation of candles. To these it gives firmness, burns freely, and diffuses a fine odor while burning. There are many parts of the United States where it is found so abundantly, that it is believed it might be made a profitable employment for children, and those not otherwise in business, to gather the berries, and fit the wax for market. The sale at home is certain, and the demand abroad constant.

Original Papers from Contributors.

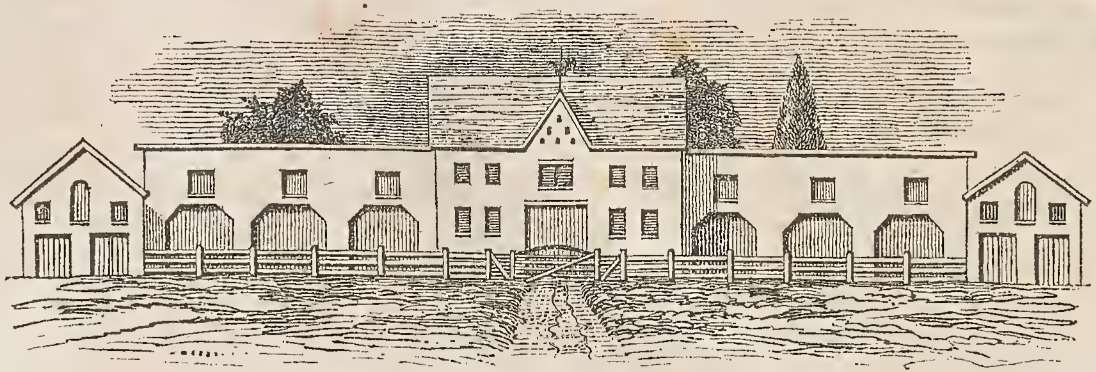
PURCHASE OF FARM LANDS.

Hints to those who intend to buy land with the view of cultivating it to gain a livelihood.

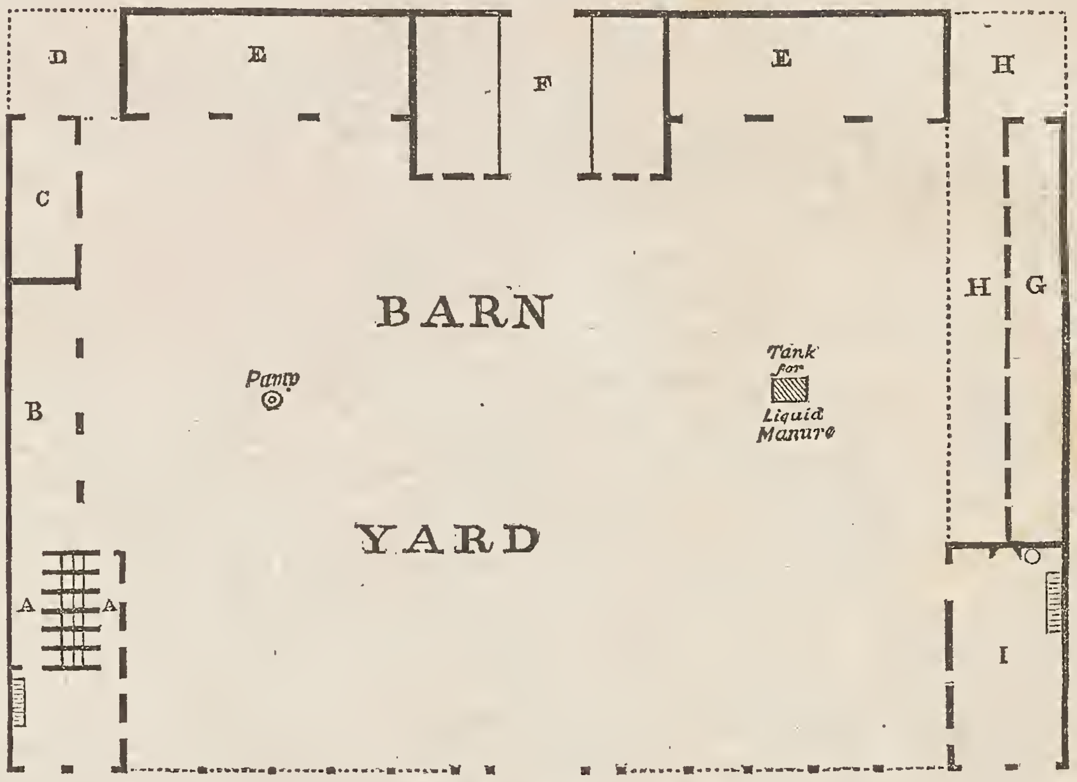
Messrs. Gaylord & Tucker—What I desire to suggest on this subject does not relate to the quality of the land, which should be an important subject of examination to every purchaser, nor of its situation in regard to health, nor to the facility of getting to a good market for the sale of the crops raised upon it,—considerations which every prudent man should regard in making his purchase; but to the *quantity* of land, and the circumstances which should regulate it. Most young men who have not been engaged in farming, are desirous of holding "*broad lands*," and are apt to invest all their funds in land, without reflecting that the land is only *one of the materials* necessary to the profitable production of crops. Agricultural tools and implements, houses, stock and fertilizing substances, seed and labor, are as indispensable as the land itself. Without a moderate surplus capital to obtain these after the land is bought, too much land has been bought whether it be fifty acres or five hundred. In England this is well understood, and should be on this side of the Atlantic. Even tenants there do not take a lease without ascertaining how much capital will be required to farm, with a reasonable expectation of profit, on rented land. Most of the embarrassments and failures of young farmers in this country, may be traced to this radical error; they buy more land than they have the means or the knowledge to render profitable. Emigrants at the west often lay out their last dollar in land; go in debt for tools, buildings, stock and even provisions; retain nothing to fall back on, depending on their crops beneath the earth and in the skies, and subject besides to storms, tempests, blights and insects, to pay off all. A single crop fails, and what then? Their land has to be sold for less, perhaps much less than it cost, the capital is sunk, and the poor miscalculating farmer is ruined. Another error is to depend too much on one kind of production—making it the staple. When several kinds of crops, such as grain, grass and roots are cultivated, there is less danger of a total failure. The weather may suit one kind, and not another so well. If the season should happen to be very warm and rather dry, the Indian corn will come in admirably; if it should be wet and warm, the grass will be abundant; if cool and dry, the wheat will yield well; if cool and moist, the potatoes will bring a good crop. But a reasonable variety of staples has relation to the market as well as to the weather—to the sale as well as to the production. Corn or wheat may sell high, and grass, hay and roots low, or the contrary. It might happen that the price of one staple may be ruinously low. But it will rarely happen that the prices of several at the same time and through the season, will continue so. Those too low in price for profitable sale, may be, if of a perishable nature, used at home, or converted into fat stock if they bear a better price, and more of the higher priced articles sold which would have otherwise been partly consumed on the farm, the lower priced now supplying their place. Variety of crops has also an intimate connexion with the improvement of the soil, by introducing a rotation in the cultivation of the land. Without rotation, enormous quantities of fertilizing matter must be given to the fields, or they will inevitably become sterile. The richest lands constantly cultivated in plants of the same species, or even genus, sooner or later yield up all the food in the soil appropriate to such plants. Good lands with a proper rotation of crops, require much less foreign aid—the previous crops leaving on the surface and in the soil, supplies of food for the succeeding ones. This is so especially true of the grasses and trefoil plants, among which red clover is perhaps the most valuable, that to cover the fields not in summer cultivation with them, is equivalent to a dressing of manure; while they at the same time yield for grazing, soiling or hay, a reasonably profitable crop. While the collection, preservation and application of fertilizing substances should by no means be neglected, the grasses and trefoils afford the least expensive means of fertilizing the soil. The labor, time, and expense of hauling and scattering, is all saved. The seed, the seasons, and the soil do it all. To keep the fields then not in summer cultivated crops covered with them, is at the basis of good farming. Virgil has said nothing wiser in his Georgics, and there is much wisdom there too, than "praise a large farm but cultivate a small one," and more especially if the owner has not an ample surplus capital after purchasing his farm, to enclose, stock, manure and cultivate it well. We incline to think that in nine cases out of ten, the man who purchases one hundred and sixty acres of arable land, would have succeeded better as a farmer, if he had bought only eighty, and applied the surplus otherwise, as indicated above. It is more economical and profitable to purchase and cultivate one acre of land which we make produce 75 bushels of corn or 30 of wheat, than three acres which we make produce only the same quantity. There is less fencing, less expense of cultivation and manuring, less expense in gathering and securing the crop.

Frankfort, Ky., Oct. 17, 1843. John Lewis.

When the leisure evening hour is employed by a family in reading the page of instruction, there grows up insensibly in the younger members, a love of home—a sentiment incompatible with some of the worst vices, and favorable to all the virtues.



Elevation of Farm Buildings.—(Fig. 96.)



Ground Plan of Farm Buildings.—(Fig. 97.)

FARM BUILDINGS.

In the first number of our present vol. we inserted the plan of a genteel Farm House, designed by T. M. Niven, Esq. of Newburgh. At our request, Mr. N. furnished the annexed plans of grounds, out-buildings, &c. to accompany the designs for the house, and the whole were published together, in the Transactions of the State Ag. Society.

Explanations.—A. A.—Horse stable, with hay and oat loft above and wagon house in front.

B.—Open shed with fowl house over it.

C.—Shed for calves with small yard (D.) attached.

E. E.—Hay houses, with accommodation for cattle underneath.

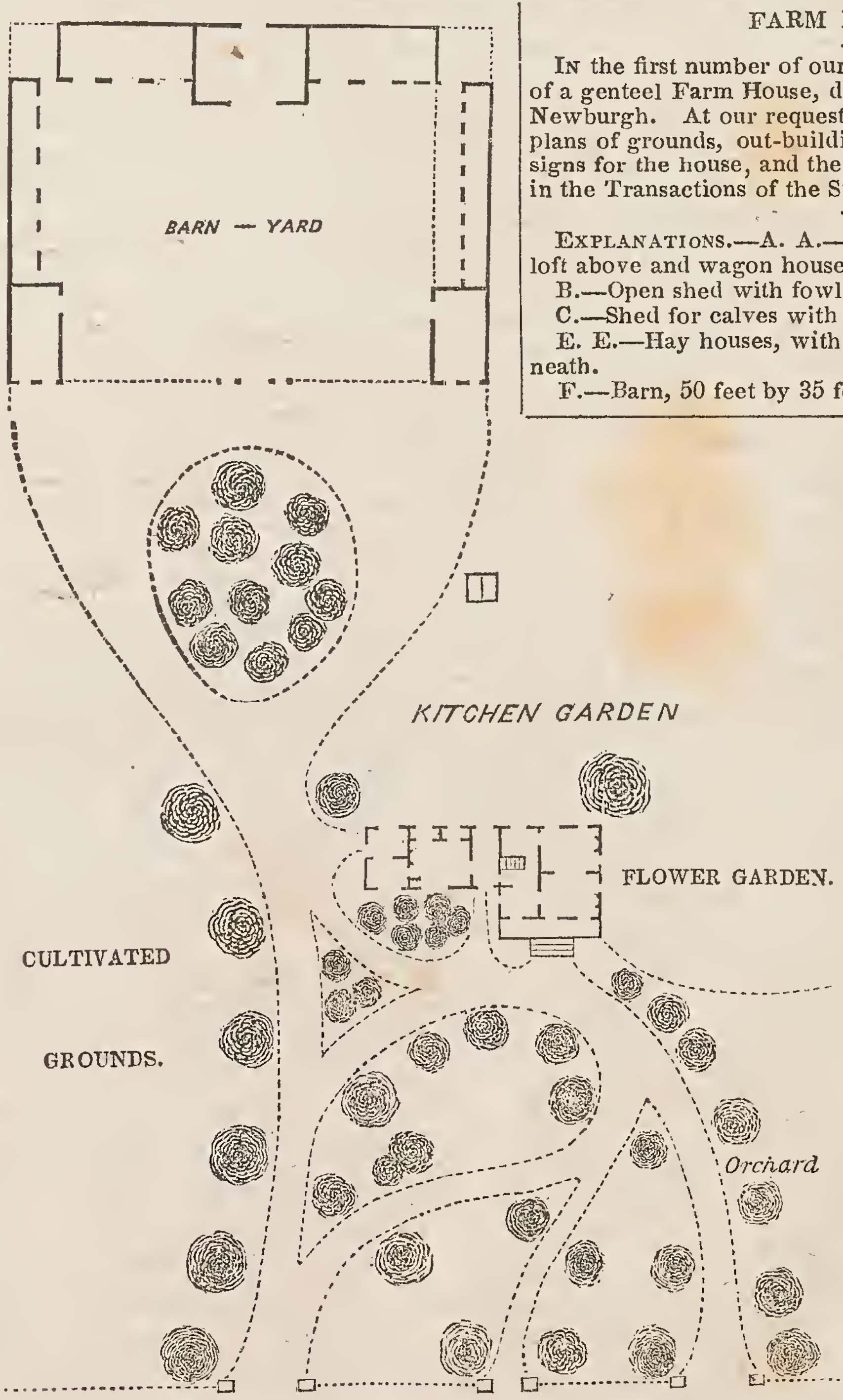
F.—Barn, 50 feet by 35 feet.

G.—Piggery, with enclosure, (H.) with gallery above opening from granary, by which the feed may be distributed.

I.—Receptacle for farming implements, with granary and work shop above, also having accommodation for boiling hog feed.

The number of windows in front of barn may seem strange to those who have not reflected upon the subject, but I am persuaded that ventilation in buildings, containing large masses of grain in the straw and hay, is of the first importance. In all these windows I would have coarse fixed blinds. It also adds materially to the looks of the building.

Cornstalks versus Corn.—The editor of the Mass. Plowman says: "You must expect cornstalks in proportion, if you make the hills rich, while the spaces between them remain poor. If your object is cornstalks, put your manure in the hill, if corn is your aim, place the manure where the roots may find some of it in the latter part of summer." This is sound doctrine. Where the whole soil is rich, a little active manure in the hill serves to give the corn a good start in the spring, and may be admissible; but if the soil is poor, manuring in the hill may give a few stalks, but will afford very little corn. Spread your manure for a good crop.



Plan of Buildings and Grounds.—(Fig. 98.)

He that has in the eye of the world no comforts, can create them for himself, and extract enjoyment out of the hardest fortune.

CHINESE MODE OF CULTIVATING COTTON.

MESSRS. GAYLORD & TUCKER—It is only now that I have met with Dr. Cloud's account of his successful cultivation of cotton. It has excited many doubts, but I trust what I shall communicate to you will remove some of these doubts, and go far to substantiate the opinion of the Doctor. Thirty years ago I was myself making an experiment in cotton, on Salsett, near Bombay; I wrote the following letter at that time, and copy it *verbatim* from my book of notes. The copy of a letter to Mr. Brown of Angericandy, Malabar:

Although the principal part of your estate is a plantation of pepper, I know you attend to the cultivation of cotton. As I have been trying this cultivation as practiced in China, the success of which I have not the least doubt, although the harvest of my crop is not yet made, if circumstances should prevent your following the same mode, you will at least be pleased with the description of it.

The earth after being very deeply plowed, is made into beds three feet broad and a foot high; mine this year are not above six inches high. A small path or gutter is left between these beds a foot broad. The seed which I used is the common Guzerat, an annual; the botanists call it, I believe, *Cossipium herbacium*. It is put into a basket and made to swell, that the best seeds only may be selected. Four seeds are put together in one hole. These holes are two feet distant from each other. They are manured three times during their growth, and at each time well flooded with water. The manure that I used was *oil cake*, made liquid in a tub standing in the corner of a field. It is poured in the center of four holes; the second time it is poured between two holes, and on the the third time when the plant is well grown and on the point of flowering, the manure is put to the root. Irrigation and manuring is performed in the afternoon. When the plant is about to throw out its flowers, about an inch of the center root is cut off to make it throw out lateral branches.

As to the season of planting, I think that adopted in Guzerat is best. The Chinese were three weeks or a month later; they did not plant until the month of September. I wish I could inform you correctly as to the produce, but I can only judge from the appearance of the plant, that the returns of this kind of cultivation under ordinary circumstances, will not be very short of what the Chinese say it is. The Chinese measure of ground is as near as can be, half an English acre. This is said by them to produce *one thousand pounds* of cotton, free of seed. If after all my experiment should not afford this amount, I should not be discouraged, as there are many circumstances attending this experiment unfavorable. The seed is not so good as that of China; the season was unfavorable, the Chinese being misled by the difference between this climate and that of their own country; the soil was not properly worked, and lastly our beds were by no means sufficiently raised.

I dare say you will be astonished at this amount of produce, but really there is hardly any limit to the returns of agriculture when the soil is skilfully cultivated and highly manured. The difference in the cultivation of sugar cane which is well watered and manured, and that cultivated as it commonly is in the West Indies, is at least six times. The Chinese say their seed is much larger than that which I provided them with, but this is merely the effect of cultivation. You may perhaps know that the cotton which the Chinese cultivate, sells as high as seventeen Taels a Picue, (a shilling a pound.)

We were somewhat embarrassed about the proper soil; the deepest is of course the best—even such valleys as are proper for rice. They of course require to be well drained, which the Chinese understand incomparably. Their main drains are separated from each other fifty feet, and the gutters between the beds make the soil perfectly dry, even during the torrents of the monsoon. Our land of this description being infested with crabs, obliged us to seek a more elevated spot. The plants are watered every ten or fifteen days, and the manure is two tons to an English acre. I have mentioned above that the seeds of the cotton are put into a basket to swell; for this purpose they use warm water, and as soon as the radical makes its appearance the seeds are deposited in the earth and a little ashes put over them.

Stockbridge, Mass., Nov. 1, 1843. L. ASHBURNER.

INQUIRIES ABOUT VIRGINIA.

WE hope some of our friends in Virginia, will furnish us with answers to the annexed queries:

MESSRS. GAYLORD & TUCKER—A number of persons, (and many of them your subscribers,) residing in Orange county, state of New-York, have had their minds turned towards Virginia, to settle as farmers, in consequence of the cheapness of the land and the healthiness of the climate, and they wish information from some of your subscribers in that state, as to the price of good land?

What section of the country is most desirable?

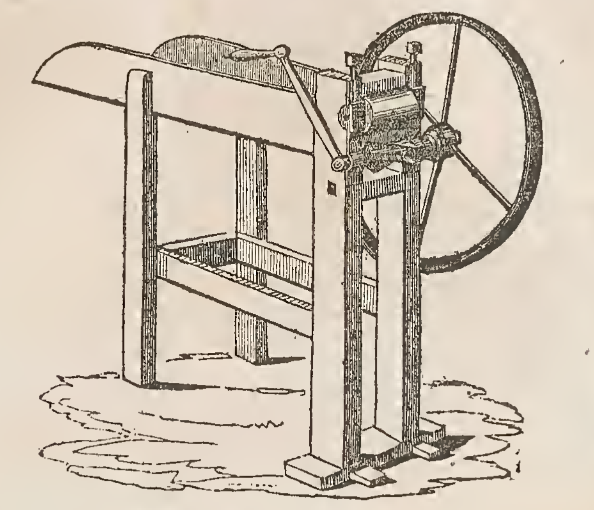
How they are situated for schools and churches?

Would it be worth while to take farming tools, cows, oxen, horses, hogs, wagons and furniture?

Many farmers from Westchester and Dutchess counties in this state, have removed to Virginia within a few years, and these gentlemen can give us the very information we want, and we hope some of them will take the trouble to answer us through your columns.

Nov. 22, 1843. ORANGE COUNTY.

The true springs of action sometimes lie hidden from a man's own view.



Hovey's Straw Cutter.—(Fig. 99.)

IMPLEMENTS OF HUSBANDRY.—No. 4.*

IT was only about ten or twelve years ago that the farmers first seriously directed their attention to the economy of cutting hay and straw for their stock; and if there was any one reason more than another that prevented the adoption, it was the slow and tedious operation, and the insufficiency of the machines then in use. To be sure there was Safford's machine, with two knives on the arms of the balance wheel, which was a great improvement on the old fashioned Dutch "Jug box;" but still the labor was great, and the operation not so speedy as desired. After this period, Green's machine was invented, and the writer claims the credit, if there is any, of introducing it to the public; since which, they have found their way into every state in the Union, Canada, Scotland and England.

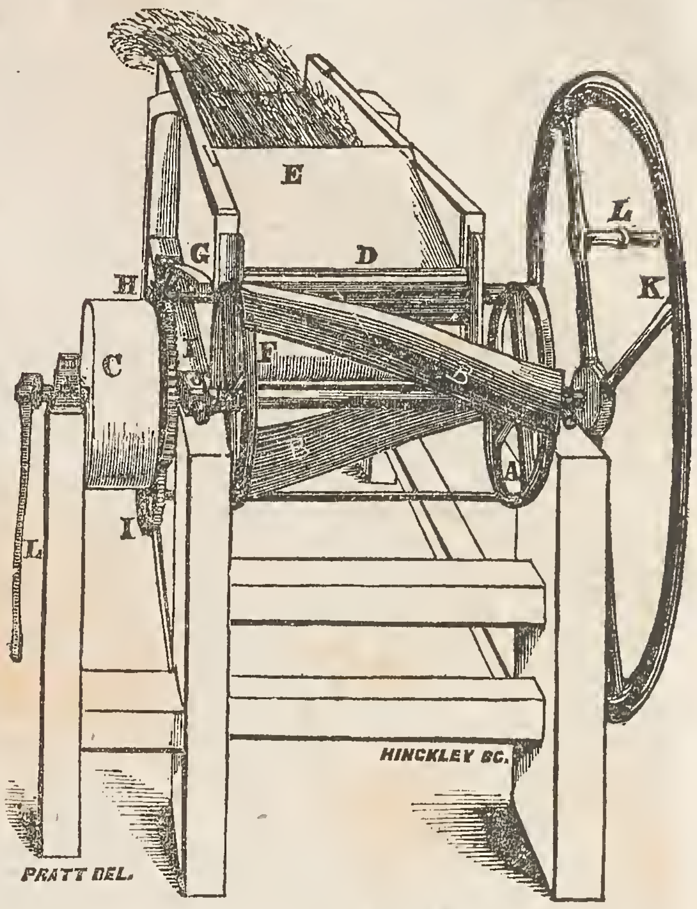
A description of one of these machines was sent, in 1837, from Canada to the secretary of the Highland Agricultural Society in Scotland, and called the "Canadian Chaff-cutter," by Mr. Fergusson, who pronounced it "the easiest and most efficient cutter he ever met with —a first rate machine." The communication was laid before the committee on machinery, who, after making a machine according to the description, and sufficiently testing its powers, reported that they found "it to bear out all that was said of it by Mr. Fergusson;" that "it is ascertained that it will cut *three times more* than the best of the common sort, and with *less force;*" and that "one person driving the machine will cut with ease five hundred weight of hay or straw in an hour." This was a high compliment to our ingenious countryman, Mr. Green, but a deserving one. The notice, with a pictorial representation of the machine, was published in the Society's papers.

In the December number of the Farmer's Magazine, published in London, I find the following notice of this machine, taken from the report of the exhibition of implements at the meeting in July, 1842, and published in the Journul of the Royal Agricultural Society:

"A premium of £3 was adjudged to Mr. James Richmond of Salford, for a small chaff engine, of a novel and peculiar kind, patented by Mr. North, an American. The action of this machine is perfectly continuous, the cut being produced by the pressure of straight edged knives, fixed at equal distances asunder, on a bottom roller, in the direction of its length, and working against an upper roller composed of a mixture of lead and zinc, between which the straw or hay is drawn in a regular stream. In principle, this machine may be considered to be diametrically opposed to that which has hitherto guided mechanics in the construction of chaff cutters; but as it appeared to be worked with remarkable ease, and to cut with a cleanness never yet excelled, or perhaps equalled, it was deemed to be entitled to reward, and to the favorable notice of the Society. At present, the maker seems to have limited the dimensions of the machine to suit the demands of small consumers; experience will determine whether the same principle can be extended to meet the wants of the large farmer, and whether, in respect to durability, it equals the better known machines."

The great demand and rapid sales of these machines in this country, have aroused the mighty genius of our countrymen, and their powers have been tasked to supersede it; and so far, with the exception of Hovey's, which I think is an improvement on Green's, no implement has yet been invented that will cut hay and straw as fast, with the same ease and power. Hovey's, which carried the Society's first premium at the Fair held in September last at Albany, competing with fifteen different machines, among which was Green's, differs from the former in having the knives set spirally in the cylynder, which cuts equally and continuously, and only a part of the knife in operation, thereby lessening the power and strain of the machine. The writer has one of these machines in use, and can speak from experience.

The machine exhibited by Messrs. Botts & Burfoot of Richmond, Va., at the Fair, has claims which should not be overlooked, and appears to be a machine long sought for, viz: that will cut hay, straw and *cornstalks*. It received some damage in the passage, and was not in good order when exhibited, or the committee might have placed it among the first. The best and most substantial evidence of the estimation in which it is held, is the fact, that the proprietors say they "have sold upwards of a thousand dollas worth of our straw cutters in the northern market, notwithstanding the hard times, since the first of October." A few of these machines are on sale at the agricultural store of G. Freeborn, Front-street, New-York.



Cylindrical Straw Cutter.—(Fig. 100.)

Manufactured by R. Sinclair, Jr. & Co., Baltimore. The prices of this machine are as follows: 20 inch cylinder, for horse or steam power, capable of cutting 1,500 or 2,000 bushels per day, $75. 14 inch, for manual or horse power, $45. 11 inch, for manual power, $30.

The next machines deserving notice, which were exhibited at the Fair in September last, were those exhibited by Messrs. R. Sinclair, Jr. & Co. of Baltimore, for horse power. These machines have been long in use at the south, and stand very high, as a strong and powerful machine. The writer purchased one of them and sent to a friend in South Carolina, who was well pleased and speaks in high commendation of it.

The other machines exhibited, some of which were specimens of great ingenuity and superior workmanship, for which the inventors deserve great credit, and it is hoped they will receive their reward in the great sales of their implements. C. N. BEMENT.

Three Hills Farm, March, 1843.

HASTY REMARKS

On the Geography of Plants and Birds—on Rearing Poultry—Use made of Turkies by Tobacco Planters—Making Capons, &c. &c., suggested by the last no. of the Cultivator.

I DO not know how far it is true that "the cultivated plants yield the greatest products near the northernmost limit in which they will grow," but the question does, as you say, "afford an interesting topic for discussion in journals devoted to agriculture and natural science."

In general, the latitude of states lying south of the Delaware is considered most congenial to the growth of the *Indian corn*, yet we have accounts of very heavy crops in a greater number of instances, in corn-buying New-England than in the states south of the line above designated. This may, and no doubt does, in a measure result from the more minute attention and painstaking habit of the New-Englander—*more manure and better tillage*. According to my observation, the peach region of the United States lies between Virginia and the north side of New-Jersey, say on the tide waters of the Chesapeake and the Delaware, and we find it growing most abundantly now in the state of Delaware, almost its northernmost limit, as a crop. But what I was going to observe is the remarkable fact in *bird*-ology, analagous to the one assumed as true in vegetable physiology, that the *mocking bird*, unequalled for his powers of song by any other of the feathered creation, is not met with, that I am aware of, in any numbers many miles north of the Delaware river. It is considered a *southern bird*, yet I have never seen as many congregated in such a narrow space any where south of it, as *exactly on the Delaware, "his northernmost limit."* Who that can carry back his remembrance to by-gone times, when we traveled across the isthmus from Frenchtown to Newcastle, taking three to four hours to go the twelve or fourteen miles, and arriving suffocated with dust and overcome with weariness—who of these does not remember the thorn hedges, redolent of the music of this noble bird, as we used to drive into Newcastle between daylight and sunrise? The thorn bushes appeared to be alive with them, as if chaunting a valedictory to the traveler as he passed the confines of their abiding. I never saw *as many* any where else as about Newcastle and Salem, on the Delaware, and do not remember to have seen *any* north of those points.

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* This communication, received at the time of its date, was was mislaid, which has delayed its insertion till this time.

You would do a service to your readers if you could persuade your correspondents to give some clue whereby they may be approached, in case of need, in person or by letter. For example: if I knew his whereabouts, I would write to your correspondent, K. L., in the last number, in great confidence that he would kindly answer some interrogatories about *turkies.* He refers to a difficulty arising from the well known propensity of the turkey to steal away slyly and unobserved to lay its eggs in the most sequestered spot, making it very difficult and tedious to watch her to her nest, or to find it by the closest search. This is a habit which has come down with them, as they have with some domesticated animals, from their "state of nature," and has not been overcome by domestication; and K. L. very usefully suggests that the difficulty may be obviated by the practice which he recommends, of *feeding them in the most familiar way,* thus inspiring confidence, and leading them to lay about the barn and stables. But if I am not mistaken, the old woman who had charge of the poultry in the county where I was "raised," had recourse to some infallible *digital*-ic examination, whereby she could always tell in the morning, before the turkies were allowed to go abroad, precisely those which would lay in the course of the morning; the rest were discharged for the day, while these were kept up until they made their ovarious deposits, when they too, about mid day, were turned abroad. In this way, not an egg was lost. On the contrary, all were gathered up, marked with firecoal, with the day of the month, and put away in tow or wool in the "egg basket," in a snug closet; and when a turkey showed signs of wishing to *sit* or *set,* in the language of housewifery, the regular number of eggs of proper age were given to her, and scarcely an egg failed to hatch. Is there any objection to this system, or any one more convenient and economical that can be substituted for it? Will K. L. allow me to inquire what number of males he would recommend for a given number of females? How long should hens be kept at breeding, and what does he consider the best food for young turkies, when first hatched?

Many object to rearing turkies, as being very mischievous and destructive to vegetables and grain; but in the *tobacco region* they are considered indispensable for their agency in destroying the worm, that greatest obstacle, even worse than the fly, which destroys the plant in the bed, to the growth of that popular weed, so detestable in the estimation of my friend, Col. Stone of the Commercial Advertiser. In Maryland, the large planters, besides rearing all they can, send round among those who are more successful, and who have less use for them, and buy up large "gangs" of young turkies, at from 37½ to 50 cents each, when they are not larger or as large as grown pheasants, expressly to assist in "keeping down the worms." As soon as the "dew is off," the young negroes drive these gangs of turkies regularly over the tobacco field, where each one takes his row, and it is curious to see how quickly they can spy out the smallest worm, and what numbers they will kill. As the heat of the day comes on, they are driven into some neighboring shade, and fed with a little grain, to prevent the worms from making them sick, and to keep them from being surfeited with *too much of a good thing.* In the afternoon they make another campaign, and without an army of turkies, the army of worms would destroy the hopes of the planter. After the tobacco has been housed, he allows his feathered auxiliaries to take the run of the corn field and the hog pen. In this way they get their growth and become fat, when all except the breeding stock reserved for the next year, become the perquisite or pin money of the good housewife, who sends them, as "fat as butter," to the Washington market, where they average about $1 to the boarding house keepers, and are in their turn *devoured by members of Congress.*

Has K. L. considered whether poultry might not be "hatched out" with greater vigor of constitution, and with more certainty of *growing off at once,* and living and doing well, by paying more strict attention to the *quality of food given to breeding fowls,* for on the nature of the food it is admitted the *quality of the egg* greatly depends? "When scantily fed, they will frequently lay," says Mr. R. L. Allen, "but from a deficiency of nutriment, the egg will be meagre and watery, and possess but a small portion of the nutritious qualities peculiar to them."

We know that plants do best, and yield the largest crops, which being previously well manured, *grow right off without being stunned,* and do better than they can be made to do afterwards, by the most lavish application of manure, if their existence has once commenced and their roots been feebly stricken in a barren soil. Under all these views of the case, may we not conclude that attention should begin with giving a sufficiency of the *best food* to improve the *quality* of the egg? Some may regard this whole subject as unworthy of a *man's* attention, contending that such matters should be left to old women; and I think it probable that in such hands they are likely to be, practically, better managed. Dr. Rush was once asked by a student, what per cent he thought had been added to the period of human life by the skill of practitioners of medicine; and he answered, "If by practitioners of medicine, you mean to include old women and nurses, I think the increase has been very considerable, but if you exclude them, very little." Let me but interrogate some old women whom I knew when a boy, on the matters under discussion, and the result for a young housekeeper, would make a perfect catechism for the poultry yard. The woman who gives practical hints on topics like this, connected with our every day comforts, is entitled to more honor than one-half the brawling patriots in the land. She may be regarded as a *real* patriot, who teaches how two turkies may be reared where only one was reared before. Nor is the art of stuffing and cooking it to be despised. For my part, I profess to entertain a certain respect for the memory of that knight of the gridiron who, as Madame Seveigne tells us, fell upon his sword in a fit of indignation, because the fish did not arrive in time to fill up the programme of the dinner for his royal master, Louis XIV. Voluptuous age! distinguished for its great immoralities and its *great men.* J. S. Skinner.

P. S. The only person that I ever saw who could *caponize* a barn door fowl, was an *old negro woman;* a slave of my grandmother. To the scandal of our domestic management, no one knows how to practice the operation. I have prevailed on medical students to attempt it, but they have not succeeded. The directions which have been given are too complicated and abstruse to be executed. The very terms used, and the preparations and implements described, would seem to call for Sir Astley Cooper to understand and carry them out. Yet those who have, in Paris, been accustomed to eating fat capons, will tell you that there is between them and the uncaponized fowl, as much difference as we may suppose to be between the mutton of a fine South Down wether, and that of an old ram. J. S. S.

Washington, Nov. 5, 1843.

"BORROWING."

Messrs. Editors—I discover that you generously lend your pages to the inquiries and suggestions of your correspondents, and for once I will state my case, and submissively ask your commisseration and aid. *Borrowing* is the weighty cause of my present trials. I began a few years ago to gather round me a few farming implements, so as to be on a small scale somewhat independent. I endeavored to get good tools, and all I needed for any particular kind of work. But I soon found others needed, but did not buy the same tools. A green sward plow was bought, with no expectation of breaking up more than four acres a year. I chose to have one, rather than get plowing done badly by the job. But a neighbor, and another and another wished to use it, each one more than I had occasion to use it. I thought a wheel barrow convenient and bought one. My neighbors in conjunction used it a week, where I had occasion to use it a day. I bought as many hoes as I ever employed hands. My neighbors each owned one perhaps, and found in planting a few choice hoes near at hand quite convenient, and when the corners were broken off they returned them, saying "they struck the hoe into a chip and it broke off;" as much as to say no violent measures were taken to mar a nice article. All was fair usage of the tool. A forcible argument in favor of getting thick clumsy tools in future. I bought an axletree and box for a truck cart, fitting my buggy wheels to them. Soon one wants the cart to drive in his potatoes, another to break his colt to the harness, &c. I have endeavored to keep a good knot-maul, but I have had two at least entirely used up by borrowers. I have two wagon boxes for a two horse wagon; one for a reserve, and one for common use. My best box is well worn, and passes for an old box without my having used it at all, or scarcely any. One wants it to bring a load of sand eight or ten miles; another wants my wagon and "green box," to ride to court with his family, or to meeting, or to bring a load of shelled corn from a neighboring town. And so, unless I begin "to make a rout," it will soon go the way of all wood ere long. I have a little orchard, and I made me a ladder for grafting, and for gathering fruit; but I must make a ladder every little while till the neighbors are all supplied, or it will take me longer to hunt up the borrowed ones than to get the apples by climbing. I have a supply of pitchforks and rakes one year, but near the close of haying they are borrowed and not returned. The next year where are they? I don't know. I mean to keep a set of augers. I have a full set when they are all at home. But to-night I wished and needed to bore a hole just so large and not smaller; but I remembered a neighbor had borrowed it in my absence, and had recently told me he would return it soon. I once bought me a valuable saddle. I soon found I had to supply five or six neighbors with the use of my saddle for all their horseback riding, which was in each case far more than mine. But I "growled" a little about it, and there are more saddles in town now. I should like to own a subsoil plow. Methinks I shall be safe in this, for few of the borrowing class will want to use such a tool. I once employed two hands to do some scraping for me. When all things were ready to hitch on to the scraper, lo! a neighbor had borrowed or taken my chain in my absence, with a familiar kind of freedom not unusual in this region, intending to speak of it afterwards. All the wheels were stopped for half an hour. I had a couple of bar posts made the past season and conveyed to a distant field, and left as it happened, in the wagon. as it was Saturday, and they were not designed for immediate use. A neighbor wanted the wagon to go to meeting. One bar post is broken or split in unloading them for the occasion; the other is now gone—doubtless borrowed.

I find poor encouragement for making improvements in my implements and products. My wheat was better and cleaner than my neighbors—not that I wish to boast. One wants to swap for seed wheat: for says he, "the heads of your wheat were twice as long as mine;" another wishes to borrow, and last on this part of my plaint, a neighbor came to-day to borrow or swap some *straw;* mine was much better than his for making cider. Now I do not object to borrowing altogether; it is quite important in neighborhoods; but there are proper limits to most good things. If you think there are other neighborhoods where borrowing is too common, I should like well enough to have you publish the above statements. There is not much danger of their creating heart burning in this vicinity, as the persons who may think the allusions personal, will have to borrow your paper to read them. Q.

We give place to the complaints of our correspondent, not because there is much hope of effecting a reformation among the class of borrowers, but because there are many others "afflicted and tormented" in the same way, and as, according to the old adage, misery loves company, there may be some consolation to all concerned to know they do not suffer alone. It *is* vexatious, to hear a man decrying all improved implements, and yet, when you have obtained at much cost, and more trouble, some few for yourself, to find him the foremost in borrowing and wearing them out, without so much as a "thank you," or "by your leave." But this is the penalty all must pay who are so presumptuous as to be in advance of their neighbors, and should be borne with all possible philosophy and resignation.

THE VINEYARD.

A Comparative View of some Native Grape Vines, and other matters pertaining to Wine making, and the "American System," in the Brinkleyville Vineyards.

Messrs. Gaylord & Tucker—A gentleman from S. Carolina made some inquiries of me lately, regarding the state of my vineyards, and my estimate of the different qualities of grapes and the like, which gave rise to some remarks which I deem proper to offer for insertion in your paper. The first part of the following is copied from the letter I sent to the inquirer.

You inquire about my native vines of peculiar excellency, and wish a description thereof, with reference to Norton's seedling in a comparative view. My Halifax has twice as large a berry as the Norton's, and is equal, I consider, if not superior in other respects, and especially freedom from rotting or any other casualty. The growth of the vine is much more extended than that of the Norton; I have them spreading over trees and scaffolding 30 feet and more each way, and bearing well wherever the vine branches go. The size of the berry prevents all depredations by birds; but not so the Norton. The Norton ripens rather earlier than the Halifax. The bunches of my Halifax are more easily cleaned or prepared for pressing; as all the grapes ripen at once, and no green ones among them. The Vine Arbor grape has a berry of somewhat different flavor, and vine leaf much larger, (hence fine for arbors;) but in all other respects, as that of the size of the fruit, rapidity of growth, and extended spread of the branches, answers to the Halifax. But the Norton is a most excellent grape, and all three very fine for table when fully ripe, and very superior for wine, and never disappoint as to a full crop, by rotting or otherwise, in my region or elsewhere, as far as I have learned, and I have heard from them from various sections of our country, wherever distributed; the Weller Halifax in particular, doing finely in Orange county, N. York, my native place. Indeed, I have reason to believe that the foregoing and other natives I cultivate, of like excellence, will do well in any part of our Union. But not so the famous Scuppernong of North Carolina nativity. Although in our region the finest grape in the world, I may say, yet north of latitude 37°, I learn it will not answer well, as ripening too late for the climate. As a circumstance to warrant the above encomium on the Scuppernong, I name that a French gentleman visiting my vineyards, who like many other foreigners, was disposed to disparage American native grapes, when coming to my Scuppernong arbors loaded with the largest of grape berries, as well as most delicious to his taste, exclaimed "here is a grape equal if not superior to any I have ever seen in France." In Southern climates under the best management, 2,000 gallons an acre may be calculated on as a vineyard product. Good brandied Scuppernong wine at rates of a dollar a gallon in the market. I make some with about two lbs. of double refined sugar to the gallon, that brings me two dollars per gallon; and is considered by many equal to the best champaigne. The Scuppernong juice is not near as strong or as much saccharine in it, as the aforesaid natives. Indeed, the juice of the latter this season, when I tested its strength with an egg, floated it so that a part as large as a twenty cent piece, appeared above the surface; or according to Mr. Adlum's test would have made a good keeping wine, without the addition of either sugar or brandy. (Some years since, I made some from well ripened grapes of my Halifax, without adding any ingredient, that kept well and continued to improve by age.) But the Scuppernong is easier gathered than other kinds of grapes; nothing to do but to hold a large sheet or blanket, (fastened to poles on two sides, and two persons to hold,) and shake the canopy above with a forked stick, and all the grapes then ripe fall into or upon the sheet. Next they are mashed with a machine of two wooden rollers, (very soon done,) and pressed, and the juice strained through several folds of a woolen blanket, and then sugar or brandy added, and put in casks; it stands till winter, and is then racked off, and is as limpid as water, and a most healthful and excellent wine. Families aware of its excellence, (as well as of my other wines,) as a medicine, send from considerable distances around, to procure it in case of sickness. A neighbor some two month since, was attacked with a complaint that usually lasted him for some weeks. I sent him a bottle of my oldest and best wine, which he avers cured him in a few days. As it is unequivocally the pure juice of the grape, churches in this region prefer my wine for communion occasions.

Some of my Scuppernong vines of 10 or 12 years old, yielded their half barrel a piece, the vintage just past. Yet this is small compared with a vine procured of me some 8 years since, and planted in a garden, which yielded a barrel last year, (I have not heard from it this;) and of another on the sea coast of this state, that alone covers near a quarter of an acre, and yields five barrels annually, besides supplying its owner and neighbors with most delicious fruit during a season of near two months. The Scuppernong far out goes any sort of grape I have ever heard or read of, (except it may be the famous Hamburgh of England, at Hampton,) as to yield of single vines. But yet my Halifax, and others, fall not far short of it as to yield by the acre. I plant all but the Scuppernong 10 feet each way; but for that 30 feet each way full near. At 40 feet, well managed, they will form a canopy over head in 10 or 12 years. Some branches of mine at that age, extend 60 feet each way.

As instances of yield per vine, of other kinds, I name that 20 of my Vine Arbor (some of them young and comparatively small,) yielded the past vintage near a barrel of wine; and about 60 of my Halifax, more than two barrels.

As an instance of the rapid increase of a vineyard in the South, when fairly under way, I state that year before last, I made about 8 barrels of wine; last year 12; and the past vintage of this season between 20 and 30; and next year I calculate on 40 or more. Particularly in the Carolinas and Virginia, where cotton is becoming no longer a profitable staple, considerable attention is awakening to the importance of vineyards. Among various late applications for rooted vines (I have nearly 2,000,) and cuttings, a gentleman in South Carolina applies for several hundred rooted Scuppernongs, (this kind does not succeed with cuttings, though well with ever so small roots,) and asks their price. I named as a medium price, 20 dollars per hundred for largest, or two year old, in nursery; 15 for one year old, and 10 for the season layers or smallest rooted.

I close this communication, (now longer than intended,) by an observation on the self-manuring plan, or that indicated by nature's process. Woods (particularly our Southern piney old fields,) are renovated by the annual fall of leaves. But apart from art, as well as nature, a vineyard could not be self-manured; for the leaves would blow away soon after falling. Therefore, I scarify the ground on the eve of frosts; and immediately after the falling of the leaves I run over the ground again with a cultivator or harrow. This done every fall, there is no need of otherwise keeping up the fertility of the soil. Another mode I use, is to cover some depths with pine leaves or other litter, and every year or so add more; a similar mode to that by which I double my crops of wheat and other small grain, and at the same time continually increase the fertility of the soil by securing a clover crop and otherwise.

As to the modes of planting, trimming and scaffolding the vines, and various processes of making wine to secure its excellency and safe keeping, or various things pertaining to what I have denominated "The American System of Vine Culture," I may communicate again shortly for your very useful periodical.

Yours, &c. S. Weller.

Brinklcyville, Halifax co., N. C., Nov. 14, 1843.

VIRGINIA LANDS.

Messrs. Gaylord & Tucker—The attention of the public has been frequently invited to the advantages which a portion of the state of Virginia now offers to the industrious and enterprising who may be disposed to settle there. Great numbers have availed themselves of them, and many are at present seeking favorable locations. To such I desire through your valuable paper to address myself.

I am the owner of the estate called Oak Hill, the residence of the late James Monroe, Ex-President of the U. States, which lies in Loudon co. near Aldie and Leesburg. It consists of upwards of 2000 acres, finely watered and in every respect capable of high improvement. The climate is inviting, and the portion of country of which it forms a part, requires nothing but an active, industrious and commercial population to render it one of the most flourishing parts of the U. States. It is distant from Washington, Alexandria and Georgetown, about 33 miles, and in a direct line from the Potomac about 9, and from the Chesapeake and Ohio canal say 12.

With such as may be disposed to unite in the cultivation and improvement of this property, I will make very advantageous terms. I will lay off proper portions, and furnish all the necessary stock and farming utensils to those who may be disposed to work them on shares. Although I prefer not to sell, I will advance to purchasers of small tracts money to stock them, and require nothing in cash, postponing payments so as to afford full opportunity to realize them from the property itself. Any other offers tending to the improvement of this estate, I would be glad to receive, and to which if addressed to me at the city of Washington, I will give prompt attention. Yours, Sam'l L. Gouverneur.

ABORTION—USEFUL SUGGESTIONS—MARLING.

We give place to the following paper, notwithstanding its length, on account of the valuable facts and suggestions it contains. The mass of excellent papers now on hand, however, reminds us that in all cases condensation and conciseness are desirable, as we find even the large and close columns of the Cultivator unable to contain all the favors of our increasing list of correspondents.

Messrs. Gaylord & Tucker—As much inquiry has been made lately with regard to abortion of cows, which has been very prevalent this year in many parts of the country, and as from a multitude of facts a coincidence of circumstances may sometimes be observed, by which a general principle or correct theory may be founded, or an incorrect one unfounded, by discovering the absence of coincidence, I give you for publication, if you think it worth a place in your paper, a few instances of abortion which I have noticed; and I mention them in part to answer the inquiry (inquiry in form, though a kind of challenge in spirit,) of "D.," in the August no. of the Cultivator, viz: whether the disease has been known to prevail except where the cows fed upon the luxuriant herbage of low, damp, rich pastures. Unless the "ergot" which he thinks produces the disease, is something that pertains to dry food as well as green herbage, or the germ of the disease is retained a long time in the animal, it will appear from what follows that the conditions he mentions are not necessary to the production of the disease. In December, 1840, I was viewing the improved stock of Mr. R. Sample, on James river, Va., and noticed that abortion prevailed among his cows, which was deeply regretted by Mr. S., as he had set much value on the calves in prospect; but though a very observing and careful farmer, he was unable to assign a cause for the disease. The cows were then, and had been for a considerable time, feeding on wheat chaff. It was suggested to him that the chaff might be the cause of the cows aborting, but he thought it not probable, since it was common for his cattle to feed on chaff at that season of the year. Their drink was pure brook water. I observed that the disease prevailed on several other plantations also, and in every case the cows were feeding freely on chaff. This circumstance strongly inclined me to the belief that smut or something else not common to grain was contained in the chaff and produced the disease. The latter part of last winter, several of the cows of Mr. G. Faile of East Chester, N. Y. aborted, though they received every attention that a very careful husbandman could bestow. They were warmly and drily stabled, regularly fed and watered, and furnished, I believe, with as much salt as they would eat, for I think this is Mr. F.'s practice. I am sure he neglects nothing that will contribute to the thrift or comfort of any thing in his care. This case at least causes a doubt of the efficacy of "D.'s" panacea, salt. Some of the cows were springing, and the embryo of others little more than half grown. When, upon inquiry, I found Mr. F. was feeding chaff to his cows, I was confirmed in my belief that something connected with chaff produced the disease. But since the disease has prevailed quite extensively this season among cows on green food only, I am inclined to doubt the correctness of the opinion I had formed, unless the ergot is common to both grass and grain. Here I observe in myself the same fault or weakness that I have sometimes observed in others, viz: the disposition to form conclusions and establish opinions, not upon the knowledge of the action of some known principle, but upon some single circumstance.

Would it not be well for editors, when opinions of doubtful authority are advanced, to accompany the article with what cautiousness might suggest, especially if the article might lead one, in adopting the opinions contained in it, to incur expense or hazard? These suggestions may seem to be justified by what follows.

Several persons in Connecticut, having seen it stated that fish oil put upon fruit trees would keep off insects, applied the oil on plum and peach trees, the result of which was the trees all died. A farmer in Maryland, was informed that to soak seed wheat in strong brine and roll it in lime, would prevent smut; he accordingly soaked all he intended to sow in a strong brine 48 hours, then dried it by rolling in lime; the consequence of which was, none of it grew. Another put his seed wheat through the same process, (but it was not so long in soak,) and it grew well; and not having enough soaked, he finished sowing the field with unprepared wheat from the same parcel, and at harvest found the brined and limed was free from smut, while the other was badly smutted. Why this discrepancy? Did the first destroy the vitality of his seed by soaking it too long? From the experience of many of the best wheat growers, I am satisfied that this preparation of seed is advantageous when rightly conducted. Notwithstanding you or your correspondents may have many times given the proper method of preparing seed, would it not be well to repeat it annually, immediately before sowing time? This idea of a thing appearing in its appropriate season, brings to mind what a gentleman in Virginia told me, namely, that three or four years ago, as he was about to begin to cut his clover, he was looking over the Cultivator, just received, and found an article directing how to cure clover hay, which at another season of the year he said he might not have noticed particularly, but as it came opportunely and seemed reasonable, he adopted it, and it was worth at least $20 to him that season. Might not some of your correspondents be more useful by being a little more explicit in their communications, and what is obscure in any degree, would it not be well for you to elucidate? A word or phrase not in common use among farmers, whose meaning would be obvious to you, might be "Greek," that is, unintelligible to many of your readers. Hence I suggest that in addition to your dictionary of terms, you give the meaning, where it occurs, of any word or phrase of doubtful import, especially of scientific terms not commonly understood among farmers. I know that some think that what you now devote to definitions might be better filled with other matter, but I believe most of your readers regard that as a valuable part of your paper.

In a paper of such extensive usefulness and circulation as the Cultivator, it would be impossible to satisfy all. While some seek to learn all that is known, and to promote the discovery of what is unknown, and to make all as free and general as the dews of heaven, and rejoice when they see any thing which may benefit somebody, if not themselves, others are satisfied with what little knowledge accident has forced upon them, unless it be something whose benefit is tangible—in other words, that will return to their hands as many cents as it cost, wtih large interest, and this they would monopolize. So it may be perfectly in character for some to complain that they don't get the worth of their money—that "too much is published that don't concern us here:" at the same time, if you will question them, you will draw from them the acknowledgment that some one article has saved them more than the paper cost for the year. I have heard men, who take your paper because it is profitable, on lighting upon an article, (of acknowledged usefulness somewhere,) which was not appropriate to their particular business, complain that they did not want to pay for a paper devoted to interests not their own. Farmers—yes, farmers—liberal and spirited as they are, complain that a paper is too much southern—too much northern—too much eastern—too much western, because it contains, it may be, an article upon the culture of cotton and tobacco, or upon wool growing and root culture, or upon the use of lime and the refuse of a comb or woollen manufactory, or upon the manufacture of lard oil, and sugar from cornstalks. Do what you will for Haman, he is dissatisfied so long as Mordecai is at the gate. A gentleman in Virginia said, three years ago, that he had taken the Cultivator one year, but would never take it again. But why this hostility to the Cultivator? Is it not the farmer's friend? Does it not collect the experience and the improvements of the whole fraternity of farmers, and thus, by circulating as it does through every part of the country, disseminate useful knowledge that might otherwise be confined to very narrow spaces, and has it not the patronage and confidence of the best farmers of our country? "Yes, it had my confidence; it recommended the putting of lime on land, and I followed the recommendation, and lost $50 by it. I put on 80 bushels to the acre, and it is all lost—worse than lost, for it has injured the land." But did the Cultivator direct that you should put lime on all land, and did you first ascertain whether your soil needs liming, and have you, before condemning it, allowed time for the lime to have its proper effect, by being thoroughly incorporated with the soil, and if it ultimately prove a failure, would it not be well for your experience in the case to be made known through an extensively circulated paper like the Cultivator, that other farmers may guard against a similar loss? "Yes, every body ought to know it." This burst of feeling came with a tone not so much indicating a wish to benefit others as to avenge a supposed injury. So you see, Messrs. Editors, that you and your correspondents may become the subjects of imprecation as well as of prayers. But what is the sequel of the case before us? Why, the lime has had time to be well mixed with the soil, has proved itself to be equal to all that was claimed for it in the once execrable article, and the gentleman now thinks he will be not $50 the worse, but $1,000 the better for taking the Cultivator. It is needless to tell you he is now an advocate for agricultural papers. Does not the case naturally suggest the following reflections? 1st. That it is important that those who communicate information be careful not to assert for facts what is mere conjecture, and that facts and experiments be so explicitly stated as not to be misunderstood. 2d. That it is injudicious to adopt any expensive improvement on a large scale without knowing its applicability to the individual case. 3d. That it is quite unreasonable to expect a thing to operate in a time and manner contrary to its nature. And 4thly. When we conceive ourselves injured, It would be advisable to wait for second sober thoughts before we break forth in denunciation, lest we injure real friends.

Permit me here to mention another instance of the value of calcareous manure. Major A. Stuart, Augusta county, Virginia, four years ago gave a part of a field a liberal dressing (the quantity per acre I don't know,) of marl, which is abundant on his farm. The first year he noticed its effects carefully, hoping to see an improvement in the crop, but he was disappointed, for the effect he thought was rather injurious; and being thus disappointed, he concluded the marl was worthless to him, and don't recollect to have noticed any effect from it the second year; but the third year he was called upon by such visible tokens of improvement in the clover crop which was on the field, that he could no longer be indifferent about the marl. This year, the field being in wheat, he found the improvement still greater, the difference being as three to one in favor of the marled portion of the field, and this difference being attributable wholly to the action of the marl. This soil is a ferruginous clay, abounding in lime rock, which, as you are aware, is the case with most of the land in the valley of Virginia. Is it not a general opinion that on limestone land calcareous manures are not beneficial? And has this opinion arisen from the supposition only, or from the fact that soils partake largely of the properties of the rocks found in them? I believe that in Mr. Colman's survey of Massachusetts, it was found that in Lanesboro, Berkshire co., which you know abounds in marble, the soil contains less lime than some other towns where limestone is not found. If, then, limestone land requires, in order to its greatest degree of productiveness, more lime, it would be greatly to the public interest to show that the fact exists, and how most easily and surely where it exists. Are the properties of lime and ashes as a manure similar? And if so, why is it that here lime is not beneficial as a manure? for this is the opinion here, though it is well known that ashes are an important article with the farmer. I neglected to mention in its place that Major Stuart's wheat on the marled portion of the field, was free from rust, and on the other portion badly rusted. A great desideratum among wheat growers is a kind of wheat that is at once hardy, prolific and of early maturity. It is difficult at present to shun both the fly and rust. During the second week in July last, wheat was badly injured by rust in Pennsylvania, Maryland and Virginia, and the early varieties came in fine. I calculate that if a variety of wheat every way equal to what we now have, but ripening two weeks earlier, could be substituted for the present varieties, it would add ten millions of bushels to the wheat crop of our country annually.

PEREGRINATOR.

Manhasset, L. I., Sept. 8, 1843.

AGRICULTURAL ITEMS.

OUR respected friend, W. Jennison of Cambridge, Mass., has communicated several notices of agricultural matters, which we have in part condensed for the Cultivator.

"MESSRS. GAYLORD & TUCKER—Below I give you an account taken from the Gentleman's Magazine, of an extraordinary yield of wheat. It seems to me improbable, but is perhaps barely possible, and I should be glad to have your opinion thereon.

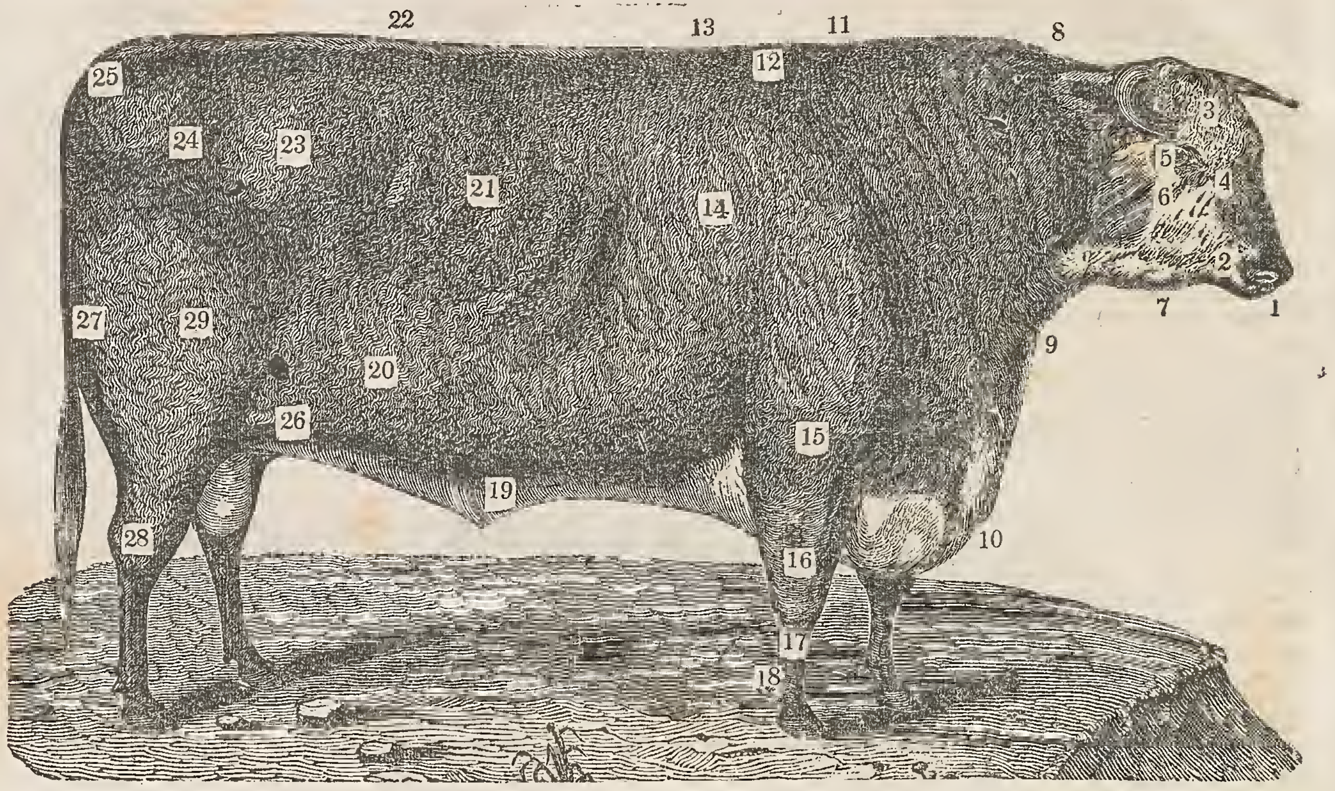
A farmer in Sussex, as an experiment, planted 18 grains of wheat at the distance of 6 inches from each other. They all vegetated, but one-third was afterwards destroyed by worms, leaving 12 plants. These flourished, and were cut in August. The product was 213 fine ears, or about 18 ears of 39 grains each, to each seed sown. The weight of the wheat, was 12¼ oz. This wheat, it will be seen, occupied 3 superficial feet. The feet in an acre is 43,360, which divided by 3, gives 14,520. This multiplied by 12¼ gives the number of ounces at 177,870, which again divided by 960, the number of ounces in a bushel of wheat of 60 lbs. weight, gives a product of 185¼ bushels per acre, from single grains set at the distance of 6 inches, over the whole."

That a wheat crop of 185 bushels per acre was ever raised, no one pretends; but there is nothing impossible in the parts of the above statement in themselves considered. That 12 seeds will grow on 3 square feet is clear; that a seed *might* produce 18 stalks or ears is also certain, and the rate of seeds per ear is not high. We have picked several ears of wheat from one field that had over 70 kernels in each, and in a head of Texan or Egyptian wheat received from the south, we had 203. We therefore consider such an acreable product as a thing that might be, but never was.

"FATTING OF HOGS.—Near Dugsburg in Westphalia, celebrated for its fine hams, the hogs are principally fattened on chestnuts and potatoes. The hogs are made nearly fat by running in the woods abounding in chestnuts, and where they cannot run at large, the nuts are gathered and fed to them in pens. In the last stage of fattening, after their range in the woods is over, they are *fed on potatoes, which are baked.* Large ovens are used for this purpose, and it is found that thus prepared, the potatoe is the most fattening of all food, while the peculiar flavor of the hams is thought to be owing to this root thus prepared. In this district few horses are worked, farm labor being mostly done by oxen or cows, the latter suffering no inconvenience from being lightly worked.

"OIL FROM THE POPPY.—In a large part of Flanders the principal articles of cultivation are tobacco, the haricot or French bean, and the poppy. A large part of the Olive trees in the south of France, were destroyed by the severe winter of 1807, and the culture of the poppy for the sake of the seed, was introduced as a substitute. The oil made from this seed is very fine, and in taste and color is much like the best olive. It is extracted by iron cylinders which crush the seed, and these are worked by windmills, of which there are more than 200 in the vicinity of Lisle alone. The pulp, or residuum, is made into oil cake for cattle, and its fattening qualities are very great; while the stems are used by the bakers for heating their ovens."

The queries of Mr. Jennison, respecting the U. S. census of Agriculture, we are unable to answer. Of its imperfections we have always been sensible; but the adoption of the system we consider as a great point gained, and one which in its results will be of vast importance to the nation. Faults of detail experience will enable us to correct, and in the future enumerations of our products, we may expect great if not entire completeness.



HEREFORD BULL "SIR GEORGE."—(Fig. 101.)

HEREFORD CATTLE.

MESSRS. GAYLORD & TUCKER—In giving my ideas of the true points a Hereford should possess to arrive at perfection, I shall endeavor to do it as briefly as my limited ability will allow; therefore I take the responsibility of amending the errors at some future period, whenever my opponents think fit to advance them *and prove them so.*

I commence with a white or brockle muzzle, (1.) (see fig. 101,) a small kind chop, (2.) flat broad forehead, (3.) white or brockle face, (4.) bright clear eye, (5.) with an expression of mildness, encircled with pure transparent white, (which in my opinion is a true indication of good handling and a superior quality of flesh; I fully believe that the eye shows the high breeding better than any other part of the animal;) small cheek, (6,) with light offal under the throat and gullet; (7.) the whole of the head small, with small long taper horns of a light color, neck thin and narrow, (8.) and light dulap, (9.) heavy wide prominent brisket, (10.) well projecting before the knees, (which I consider the second point to be looked at in good breeding,) shoulder blades (11.) and crop (12.) level with the chine, (13.) which should be broad, straight and fleshy, and perfectly level between the ribs (14.) and shoulders, the lower part of the shoulders (15.) light with little offal, arm (16.) short and sinewy, bone between knee and hoofs (17.) small and short, supported by strong sinews (18.) and muscle, belly or bottom (19.) straight with light paunch, (20.) ribs (21.) round and well filled up toward the hip, loin (22.) wide and flat and straight with the chine, hips (23.) broad, large, round and fleshy, long between hip and rump, (24,) the latter lined with mellow flesh, the ketch (25) prominent, the tail set on level with the back, of a moderate size, flank (26.) heavy, the udder should not be large and bulky, but free from flesh, loose and supple; quarters of an equal size, teats well spread and of medium length and size, twist (27.) heavy and fleshy, hock (28.) strong, thigh (29.) not too large. Coat soft, thick and silky, hide thick, and mellow handling, the whole appearance of the animal grand and showy, with every symptom of activity. I want the bull to have all the above points *except* the sexual distinction, a heavy animal in small compass.

Hereford Hall, Oct. 15, 1843. W. H. SOTHAM.

EXPERIMENT IN WHEAT.

MESSRS. EDITORS—The following novel and interesting experiment which I find in the London Times of the 9th September, 1843, having lately been successfully made at Cheam, in Surrey, deserves a place in your valuable journal. A. WALSH.

Lansingburgh, Nov. 18, 1843.

In July, 1842, Mr. A. Palmer put one grain of wheat in a common garden pot. In August the same was divided into 4 plants, which in three weeks were again divided into 12 plants. In September these 12 plants were divided into 32, which in November were divided into 50 plants, and then placed in open ground. In July, 1843, 12 of the plants failed, but the remainder 38 were healthy. On the 19th of August they were cut down, and counted 1,972 stems, with an average of 50 grains to a stem, giving an increase of 98,600!

Now sir, if this be a practicable measure of planting wheat, it follows that most of the grain now used for seed, may be saved, and will infinitely more than cover the extra expense of sowing, as the wheat plants can be raised by the laborer in his garden, his wife and children being employed in dividing and transplanting them.

I have enclosed one of the stems as a sample. You will find it rather above six feet long, and stout in proportion. HENRY POWNALL.

Spring-grove, Sept. 9, 1843.

There are great varieties in our persons, but the varities are greater in our characters.

VISIT TO THE TIOGA FAIR.

MESSRS. GAYLORD & TUCKER—At an early hour on the morning of the 3d of October, I sat out from Ithaca, accompanied with a friend, to attend the Agricultural Fair of Tioga co. held at Owego. The weather was raw, with indications of rain, which, together with a militia "general training,"—which by the way is the greatest humbug of the day—in the vicinity, prevented as large a gathering at the Fair as that of last year. However, the number was respectably large, and on our arrival at head quarters, we found the President of the Society and Executive Committee actively at work remodeling the viewing committees, owing to delinquences, and arranging articles presented for the in-door exhibition. For my own part, I had not formed large expectations of pleasure from any exhibitions of stock which might be made—the herd of Mr. Geo. J. Pumpelly, excepted, which I had heard commended—but I am bound to say that I was agreeably disappointed. Tioga has long been celebrated as a "lumber county," and not famed for any special advances in agricultural improvement; hence it was that the display of so much good stock took me by surprise, which is doubly honorable to the enterprise of her farmers, considering the disadvantages they have contended with compared with their brethren in older and more favored counties. The cow belonging to the president, as well as several others, the owner's names of which I regret having forgotten, were quite attractive and would have been worthy of remark any where. There were several pairs of steers too of great beauty, indicating Devon blood. The paucity of working oxen was regretted, as there are probably few counties in the state that could make a larger display of good ones, inasmuch as so many are necessarily employed in that important branch of business of the county, lumbering. I beg leave to suggest that the Society will do well to enlarge their premiums on working oxen, being in so much request, indeed so indispensable in all lumber districts. The specimens of "long wooled sheep," of which the exhibition was numerous, were in general, good; and of South Downs there were several "real beauties." The truth is, for mutton, the latter are unrivaled, and considering their easy keep compared with the Leicester, will eventually take a front rank in this country, where they already stand in England. Two capital Merinos were shown, and some grades, but not a *Saxon!* Well, this is not altogether strange, for Tioga is not yet quite *out of the woods,* and her hardy farmers have not probably learned the fact that the Saxons have this year eclipsed all other varieties in profit, and will continue to do so until they are far more numerous than at present. Those who have gone back to heavy gummy fleeces will live to learn their error. Let this be noted.

But decidedly the most attractive part of the exhibition was the numerous herd of half blood Short Horns, belonging to Geo. J. Pumpelly of Owego. If any man ever doubted that our native cattle were susceptible of improvement by crossing with the English breeds, or that improvement was soonest effected by means of the Durham, in preference to any other improved breed for dairy purposes, his doubts would be dispelled could he see this fine herd, accompanied with other proofs which Mr. Pumpelly has to offer of his success. Crossing with the best native cows, both as to form, and especially milk, has been and now is the favorite object with Mr. P.; indeed, for dairy purposes, he thinks the pasture of the valley of the Susquehanna too luxuriant for the full blood Short Horn cow, being fully of the belief, drawn from the experience of several distinguished breeders in the state, that she would run too much to flesh, and in this ratio her milking qualities would deteriorate. In this conclusion I am well satisfied he is correct. But this intelligent gentleman will probably make known in the columns of the Cultivator, the result of his experiment, when more fully consummated. I will further remark that Mr. Pumpelly was among the very first in this state to act in the Short Horn enterprise, not only with a view to improve his own stock, but that of the farmers in his vicinity; and like all who were earliest in the cause, he is deserving of much commendation, for the reason that it demanded then a much larger pecuniary outlay than at present, and far more prejudice was encountered from that numerous class of farmers known as anti-innovation and anti-improvement. His bull from which most of his cross stock have originated, is an imported animal, formidable as to size, of great length, very hardy, and with the exception of some coarseness about the neck and head, is good; and his stock gettings manifest the excellence of his blood.

The exhibition of vegetables was very good, not only indicating good culture, but demonstrating the capacity of the rich soil of the valley where they were mostly grown. Indeed, further proof of its fertility was to be found in the report presented to the Society of a wheat crop of five acres, averaging 40 bushels to the acre, grown on the farm of the Hon. Nehemiah Platt, in the town of Nicholas, adjoining Owego. It was sown after corn; variety, Hutchinson, which by the way is very hardy, and much less liable to be affected with rust than some other kinds.

In consequence of holding the Fair but one day, the address was delivered at the Court House in the evening, by the President of the Society, Mr. Charles Frederick Johnson, who is well known to as all his friends as a gentleman distinguished for his literary and scientific attainments. As a composition it was classically chaste, and in the treatment of the several topics embraced it partook of the rich and useful stores of the author's mind; and although I have listened to a number of excellent addresses of this character, this, I must be permitted to say, surpassed them all. Hence it should not be laid under a bushel, but published, to which I hope Mr. Johnson will eventually consent. This judgment was unanimously awarded by the numerous and intelligent audience.

The "day after the Fair," I had the pleasure of seeing the operation of one of Ruggles, Nourse & Co.'s subsoil plows, on the farm of Mr. Pumpelly, which was admirable. But there were no stones for it to encounter, and how it would work when they abounded to any extent, is with me a question, for I had never seen one before in employ. The field of ruta bagas which we were shown, bid fair to equal the extraordinary crop grown on Mr. P.'s farm last year, the account of which was recently published in the Cultivator.

The farm of Mr. Johnson, at least that portion I saw of it, appeared in fine order, and reflected the good management of the intelligent Scotch tenant who tills it.

Few comparatively of your readers are perhaps aware of the charming locality of the village of Owego in the the vallies of the beautiful Susquehanna, and another stream called the Owego creek, which, from its fulness and width, were it in the old world, would be dignified with the name of river. The scenery which environs the place is varied, and truly picturesque; this, however, is not the place to enter into particulars concerning it. But another charm of a more exalted character is to be found in the superior intelligence and moral worth of a large portion of its society; and with many others before me, shall cherish grateful recollections as a recipient of its cordial and truly refined hospitality.

Your friend, L. A. Morrell.

Lake Ridge, Tompkins co. N. Y., 1843.

EXPERIMENT WITH CHARCOAL.

Messrs. Editors—I mentioned to you last spring, that I had sown fifty-two bushels of charcoal dust to the acre, on wheat, and would give you the result of the experiment. In order that my promise might be fulfilled, I selected a corner of a twenty-five acre field of wheat, containing by survey two rods; the grain was harvested while in the milk, on the 17th of July; threshed, cleaned and measured on the 21st, yielding 31 quarts and 1 pint, or 78 bushels and 24 quarts to the acre. As the above fact may appear incredible to many wheat growers, I enclose the survey, and certificates of two of my men who measured it.

I have grown cuttings of the Camelia japonica, soft wooded geraniums, cactus, wax plants, &c. in pure charcoal dust, without any admixture of earth; likewise corn, beet, carrot, and other seeds, and believe it to be the most valuable substance now known as manure, being pure, incorruptible and lasting.

Yours respectfully, Robert L. Pell.

Pelham, Ulster co., Nov. 20, 1843.

I, M. W. Powell, surveyor, hereby certify that I have measured the ground herein described, beginning at an apple tree, and running a northwest course ninety-five links, thence a southwest course fifty links, thence east thirty links to a line to the north angle, thence east seventy links to the place of beginning; the line from the base to the north angle being twenty-six links, containing two rods, which is a portion of R. L. Pell's wheat lot No. 2.

M. W. Powell.

Affirmed before me on the 15th day of July, 1843.

M. M. Keeler, Justice of the Peace.

We, Patrick Farrell and Leonard Latten, hereby certify that we *gathered, threshed, cleaned* and *measured* the *wheat* grown on the above described *two rods* of ground, belonging to Robert L. Pell, Esq., of Pelham, Ulster co. and the yield was 31 *quarts* and 1 *pint*, dry measure; we believe if the gleanings had been threshed, there would have been *one bushel*.

Patrick Farrell,
Leonard Latten.

SHEEP ON THE PRAIRIES & OTHER MATTERS.

Editors of the Cultivator—Your complimentary note in the October number, upon the subject of my removal from the office of Postmaster, (which I had held for many years with but a mere trifle of compensation for a large amount of service, except the advantage of the franking privilege,) has given me great satisfaction, and induces me still to go on trying to contribute my mite toward promoting the happiness of my brethren in a good cause. Permit me here to say to a number of my correspondents who will probably read this, for their acquaintance with me seems to be formed through your columns, that the principal reason why I have not answered their letters of late is because I felt unwilling to burthen them with a heavy postage tax for a letter that I could not believe would be worth the money. For the same reason, my communications to the numerous agricultural papers will be less frequent than formerly. By this, however, I must believe that the public will lose less profit than I shall pleasure. It is in the power of the agricultural class, and I think it is their duty to endeavor to bring about such a state of public feeling as to eradicate the monstrous false doctrine from this republic that leads our rulers to such wanton acts of "proscription for opinion's sake."

If we cannot effect the adult population, let us rear up our children in the nurture and admonition of better principles. Why cannot we feel and act in all the concerns of life as some of the great men of antagonist political principles did at your glorious great Fair at Rochester, where they met as brothers and friends of the good and great cause of agricultural improvement? How much I regretted, while reading the proceedings, that I could not have been there to enjoy the pleasant scene. How much do such meetings tend to soften the asperities of human nature, and to create a neutral ground where those of every political and religious faith can meet and know each other only as brother farmers—tillers of the soil themselves or disposed to lend their countenance and talents toward the promotion of an object that has the bettering of the condition of such a vast portion of the human family in view.

But I am wandering from my objects, one of which is to say a few words to my friend Jewett upon the subject of his article in the September no., headed "Sheep on the Prairies."

Your article bears internal evidence that you have never visited the prairie region. Whether the western country at large is or is not as favorable as Vermont for sheep raising, remains yet to be proved. But as you do not know of any large tract of country where sheep succeed well on level lands, or at least on lands free from mountains, such as are all of the northwestern states and territories, I will inform you that the great state of Ohio is that very country. Again, you are mistaken in your notion that the western prairies are a level, wet tract of country. They are often hilly—always undulating, except what we call marsh, which bears about the same proportion to the other parts that swamps do to other lands in the eastern states.

Although sheep may be fond of hills, yet they are also fond of good pasturage, such as the wild prairie grass affords in abundance sufficient to feed all the sheep in the Union. As to the sweeping winds and storms, *I know* that they are not so severe or frequent as in the eastern states. True, we have more steady windy weather, but not severe, as is proved by the fact that that unstaked rail fence very seldom blows down in the most exposed situations. As to free and pure air for sheep to breathe, I pray, friend Jewett, come and try it yourself. Spend a month or two with your friend Solon, and be convinced that he speaks truth.

Those stagnant pools that have so staggered your faith in favor of western sheep breeding, are so few and far between, that the sheep, having a wide, open country, well suited for a race, are able to outrun those awful carniverous insects that abound only in thy imagination in great numbers.

The objection against the unevenness of our winters is certainly not calculated for this latitude. For nine years the winters have been dry and cold, with but a small quantity of snow at a time—never so deep as to hinder sheep from getting about; and about five months in length, instead of five months longer than usual. Heaven protect us from that! Ten months of winter! Think of that in latitude 41½! True, last winter was the most severe one known since the first settlement here. It commenced November 16, by a snow storm more severe than any other during the winter, but the ground was not frozen for six weeks, and sheep could live well on rye or timothy pasture. I have known good feed in March, but it is not generally looked for until the middle of April. If calculation is made to feed sheep five months, it will not prove so poor a calculation as you calculate, and I calculate that there never will be any danger of millions of sheep perishing in the winter, particularly after being stung to death in the summer, besides dying of the rot occasioned by the malaria of those stagnant pools; and if we cannot raise fine wool, why we will try a coarser quality, until we get a breed that will stand and "turn like a weathercock," and if we derive no other advantage, we shall be able to tell which way the wind is whenever we can see the sheep's tails.

And if prairie grass will answer for small flocks, why not for large ones? For certainly one of the great advantages that we possess is in not being under any necessity of stocking so close as you do in Vermont. We have no occasion to confine them to a tenth, while the whole is free; and I assert it as an indisputable fact that your white clover pastures cannot furnish better mutton or healthier sheep than the wild prairie grass ever has done throughout the whole prairie region.

"Some say"—well *I* say, "that government lands can be occupied rent free," longer than you or I will ever need pasture for our flocks in this world, prudent though I hope we both are in our dependance upon the future.

Wolves, too, which you hold up in terror, have no terror for the western shepherd, because none but the little insignificant timorous prairie wolf abounds, and they abound not in sufficient abundance to make sad havoc in a flock.

Although distempers "may prevail," yet again they may not; because as yet they never have, and sheep have been bred in the west some 30 years, and until "scab and foot rot and sore toes and ragged coats," (no personal allusion I hope, in that last complaint,) come among us, we cannot tell what we shall do; but certainly we shall have the best chance in the world to change our pasture till frost comes. But after all this great array of diseases and dangers, here comes a reason therefor. It is in truth, because you are not alarmed about western competition in the wool market, that you have so kindly been trying to pull the wool (*from*) over our eyes, before we quite ruined ourselves with some of these "formidable objections" to the success of raising sheep on the great western prairies, that really seem to me as better adapted to that use than any other in the world that I know of.

"But time will test the question"—and in the meantime I shall try to grow wool in the west, and humbly advise some ten thousand more of my fellow laborers to go and do likewise.

I had some other subjects that I intended to speak of, but you see my space is full, and I cannot think of taxing you with double postage upon such a wooly subject, notwithstanding your very liberal request, for which accept my warmest thanks.

I hope to be able to have a word with your readers more frequently during the winter evenings; though I find that my eyes are getting rather too wooly, and I dread to acknowledge that I am obliged to call for spectacles, an article which I have not yet used.

I remain yours, and your reader's old friend,

Lake C. H., Ia., Nov. 1, 1843. Solon Robinson.

DISEASE OF POTATOES.

Messrs. Gaylord & Tucker—Many of the farmers in these parts have lost their crop of potatoes entirely, and others have suffered considerable damage, in consequence of a singular destruction of the crop. The potatoes, when dug, were remarkably fine in appearance, but when put in heaps in the field and covered as usual, they became a rotten mass. In a dry cellar, they held their appearance tolerably well, except somewhat darkened and a little shrivelled, but on breaking them open, it was found their surface, about a quarter of an inch in thickness, was of a dark brown, and some of them entirely through were of the same color. I usually raise between 2,000 and 3,000 bushels a year; this year my crop was a fair one. I fed my hogs, as I always do, with those that were not fit for market nor seed. I heard it rumored that they were poisonous to hogs, but I could not believe it, as my hogs had not been fed on any thing else except a small quantity of corn once a day. I have them boiled, mashed while hot, and as they are fed out, mixed with a little milk, &c. I watched them with a little anxiety, and about two weeks ago, I heard an unnatural coughing amongst them, but I could not yet believe the potatoes caused it. Two of them soon began to pant, as if worried in a hot day; in about a week after they were taken, they refused to eat. They continued panting and struggling for breath four or five days after refusing to eat, and then died, with froth running out of their nostrils. I have a sow, with a litter of pigs about three months old; I observed the pigs began to cough and pant, so I have concluded to stop feeding potatoes to my hogs. I cannot say that the potatoes caused the disease, but certainly it seems so. Most of the potatoes raised in these parts are Mercers; other kinds, I am told, are effected in the same way, but not so extensively. Yours, &c.

Peekskill, Nov. 16, 1843. Tyler Fountain.

FATALITY OF THE POTATOE.

Messrs. Editors—We in this section of country have this year been retarded in our prospects of the potatoe crop in a very remarkable manner, by a very strange fatality which the oldest inhabitants have never before witnessed. The potatoes have been attacked by a disorder somewhat resembling the plague, generally called the rot. This disease spreads with amazing rapidify from one potatoe to another through the entire crop, without the greatest care. When once saturated with the disease, the stench that emanates from them is almost insupportable to the olfactory or nasal nerves; I cannot conceive a scent more fœtid or disagreeable. Many have left them to decay and remain where they grew; others raised them and placed them on dry, cool floors, spread out to dry; but the plague spread among them, and few have been saved, I suppose not above 20 per cent, and they of course not of so good a qualitty as in good seasons. The doctors say none should be eaten, for fear of deleterious effects. Hogs I have heard have died of eating them. I have frequently seen a small, dark, mortified kind of spot, the size of a finger nail, on the potato, whence issued bubbles of matter; soon the potatoe would be entirely soft, filled with a yellowish matter, slimy, and somewhat resembling the rot of an egg. The touch of other potatoes would impart the disease, which would spread through the whole family. One man of my acquaintance took his up about the first, (many were raised earlier than common;) he had not heard of the disorder, nor did he suspect it from outward appearance, (thus many were deceived.) He placed them in his cellar, and when the talk arose about bad potatoes, he examined, found his potatoes spoiled, and threw them away. This disease stretches its baneful influence, so far as I have heard, in Pennsylvania, from near Philadelphia, westward beyond the Susquehannah river to York county. I presume the inhabitants where good potatoes are, may take a hint from this, feed more sparingly, and find a good demand at good prices, at least in a considerable part of Pennsylvania.

The causes attributed to the failure of the potatoe, are variableness of season, long and frequent heavy rains, with intervals of extreme hot sun. Their growth was evidently pushed very fast, and I have seldom seen more plentiful crops or larger potatoes.

Chester co., Pa., Oct. 17. JOHN M. HARLAN.

Veterinary Department.

CURE FOR BOTS AND MURRAIN.

A WRITER in the American Farmer, who signs himself "J. W. J.," gives a number of instances in which he has been successful in curing the bots in horses by the use of lime, and in preventing the attacks of murrain by the same remedy. Having a few years since purchased a very fine horse, he soon found he was diseased, and in spite of the various remedies administered, grew worse. Finding he discharged some bots, he suspected the difficulty might be found in them, and commenced giving him a table spoonful of slaked lime three times a week, in bread mashes. Pursuing this course two weeks, the bots began to pass off in large quantities; his appetite began to improve, and in six weeks he became well and sleek. Since this, he has continued the use of lime among his horses with the best effect, and though he had lost many before, he has lost none since from any cause. Spirits of turpentine he found produced no effect on the live voided bot, while if put into lime, they were perfectly dead in forty-eight hours.

Mixed with salt, and fed to cattle two or three times a week, or rather by allowing them always to have access to troughs containing the mixture, he deems lime, and we think with very good reason, an effectual preventive of murrain. Since he commenced its use, he has not lost an animal from this disease, though some of his neighbors who neglected this precaution, have lost nearly all their cattle by it. In one instance, a farmer living near him lost nearly all his stock by this disease, while the animals of a neighbor living within 200 yards, and which ran daily with those that died, all escaped. The owner of those that escaped made it his rule to fling them a handful of salt and lime every morning. At the west, where the murrain is very prevalent and fatal, lime and salt are becoming to be considered a specific, so far as prevention is concerned; and when it is recollected that the disease once developed is rarely cured, it would seem advisable to adopt the use of this mixture wherever danger is to be apprehended.

BLIND TEETH IN HORSES.

WE find the following in the Southern Planter. The facts stated appear somewhat curious to us, as we can find no allusion to such teeth in either Lawrence or Youatt. They indeed describe minutely the tusk which in some horses occupies the place of the one noticed in this extract, but no such qualities are ascribed to it by them, and examination will show it to be one of the firmest set teeth in the head. If any of our readers have noticed such teeth as are here described, and particularly if blindness has been in any case traceable to them, we should be glad to learn the facts, as every thing relating to that noble animal the horse must interest all engaged in agriculture.

"Mr. Editor—There occurs in some horses, between the ages of three and six, between the bridle tooth and grinders, a *small, long tooth*, without roots, and not inserted in a socket, but merely in the gum of the upper jaw. It has never been alluded to in any system of farriery, but our planters can trace its existence in this state for more than half a century.

"It may and doubtless does occur in horses of any shaped head, but in the three cases on my own farm, it was in horses of *dished* heads. One had gone entirely blind before I was apprised of the cause, and the other two I relieved by immediately extracting the *blind teeth.* Hundreds of instances could be adduced of the existence of blind teeth, and the destruction of sight when not extracted. No horse has ever been seen with them at mature age, *having good eyes.*

"It is conjectured by some to be peculiar to Indian corn feeding; by others, to a hot climate. The three cases under my own observation were in horses raised on my own farm; and not having ever seen any allusion elsewhere, I am inclined to believe *it is confined to the south.*"

The Garden and the Orchard.

CULTURE OF THE PEACH, &c.

MESSRS. EDITORS—In your present number, Mr. Butler has an article headed "Culture of the Peach." Speaking of the yellows, he has observed "that when one tree was infected, other trees standing near would be, unless the infected tree was immediately removed." Is it certain that the trees adjacent to the one removed, would have had the yellows without the removal? Has he cured the first appearance of yellows, by the removal of a tree from which the disease was supposed to be communicated? I have never removed a tree having the yellows, and I have as vigorous and as healthy trees with their limbs almost interlocked with trees having the yellows, and with others having died with the yellows, as I have ever seen or ever wish to have, and are open to the inspection of any person. The other part of his article partakes of too much incongruity, to need any remark. He wishes to know how Peach trees can be grown to insure fruit? Cultivate your trees till they begin to bear fruit, by plowing or digging about them in the spring of the year, and at the same time give them a good top dressing of well rotted manure and ashes. The earth about them must not be disturbed during the summer months. Indian corn is the best crop I know of, to cultivate with the trees, and you might cease to work the ground after the trees are three years old, and sow grass seeds. The grass should never be cut and carried off the ground. After you are done working the ground, spread some good long manure every fall for several years, over the surface of the ground, as far out as the roots are likely to extend, and in the spring cover the surface of the ground with straw to the depth of several inches, and if your trees fail to produce fruit, then I will admit myself in error.

Your correspondent "P." says he planted his corn according to my directions and failed. I rather expect he is in error. My plan is to plant just close enough to keep in check all spontaneous growths after the corn has attained one-third its matured height; and to obtain this, the corn producing a short stalk, admits of being planted closer than that producing a larger stalk. P. says his peach trees where he now lives, are not diseased, and thinks they never have the yellows in new lands, "till one generation of peach trees has passed away." This is doubtful language in regard to time; but without remark to what length of time constitutes one generation among peach trees, allow me to say, that upon a farm I once owned in the state of Arkansas, peach trees grew well upon one part of it, and upon another part they did not; that one of my then neighbors, complained that he could not grow the tree, and that his next neighbor had no difficulty in raising them. Now this was all upon new lands, and within two or three miles square. On those lands that I supposed held in combination more than the usual quantity of nitre, the tree did very well; but whether it was from this cause or not, I will not undertake to say, as there is another way of accounting for it. This, and all other trees and plants that I cultivate, are benefitted by preventing the earth in which the roots run, from sudden and rapid changes of temperature, and a new soil made up of light vegetable particles, would have the effect to produce a greater equality in the temperature of the earth, than the same soil would have after being exposed and worked for some years, and possibly your correspondent's fine trees are produced from both of these causes.

While upon this subject, allow me to give to the society offering a premium for the prevention of blight, &c. in the Pear tree, my views, though I have no desire to take their premium; holding myself largely indebted for much information obtained through the aid of such institutions, I give what I know free of all charge, and if I am right in these suggestions, they can appropriate the amount for some other public purpose.

BLIGHT IN THE PEAR TREE.

The blight in the pear tree is produced from one of two causes, or from both. 1st. The cultivation of the tree after a set of organs have been established and matured for the production of fruit, and in situations where manure cannot be applied, it may be for the want of the necessary pabulum for the support of its organism and for fruit. 2d. For the want of protection to the roots, from sudden changes of temperature.

To prevent this disease, it is necessary to cease cultivating the ground the trees occupy, after they commence bearing fruit; and cultivate the tree by top dressings of manure, to be applied in the fall of the year, and by covering the surface of the ground with straw, litter, tan, or any other matter that will protect the roots, or rather the ground in which they run, from sudden rise or fall of temperature. If the soil is destitute of iron, this mineral should be added to it. I mention the iron from various observations made where it has been of vast importance in restoring to health diseased pear trees, and from observing that pear trees grow vigorously and live almost entirely exempt from disease, upon soils containing iron, provided the trees are not injured by cultivation, after they have perfected a set of vessels for the formation of fruit, or in other words, after they commence bearing full crops of fruit; but the iron alone is no preventive, but seems to form an important ingredient to this tree. In no case, should the ground be disturbed by plowing or digging after the tree commences to bear fruit.

All perennials with which I am acquainted, make preparation one year for the next year's fruit. Whether this is the formation of organs annually, or the deposit of matter in the plant for fruit, or partly of both, is not necessary for me at this time to inquire; but that such preparation is made, is clearly shown by pulling the summer growth of leaves from off a branch of a fruit tree, that is in full bearing, while succulent and before they become firm and hard. This branch, if the experiment is properly made, will produce no fruit the succeeding year. An injury inflicted on the roots with the plow, and particularly if done in July or August, will produce disease, and if any fruit should be formed on the tree thus injured, it will be defective.

Writers upon orchards, tell us that certain kinds of pears are not worth cultivating on account of disease; but at the same time, admit that trees of these kinds are still in existence, and continue to produce good fruit and are to be found in cities, and I strongly suspect, in situations where the ground around them is not cultivated; and where their roots are protected by brick pavement, or by something else, from sudden change of temperature.

A protective covering to the roots, is not only of advantage to the pear tree, but to most if not all other plants we cultivate upon our farms: and for the want of it, can be attributed many of the diseases our plants are subject to. Upon a good soil, the peach tree is rarely if ever infested with worms, if the roots to their extremities are placed in a situation where the temperature of the earth about them is gradually raised and diminished by the many sudden changes of weather in our climate. I have five trees thus situated, about which a worm has never appeared, although my orchard has furnished them in thousands, together with a nursery I have kept for the purpose of inquiring into their history, still these five trees remain untouched by worms.

The Plum produces well and is exempt from disease when properly tilled, and its roots protected from sudden changes of temperature.

Nature's plan is to protect the roots of the plants either by shade from the green foliage, or by decayed and decaying vegetable matter, and by both. A tree standing alone, and not near other trees, and without artificial aid, grows but slowly till the ground becomes covered with decayed vegetable matter, and its branches extend sufficiently to produce a shading to the ground occupied by its main roots. Our forests are affected by the timber being thinned out and the undergrowth kept down; the trees become diseased; worms make inroads upon their trunks and branches, and a slow decay takes place; while the woodland next adjoining, left undisturbed by man, continues in fine health and as vigorous as ever in growth. Now if nature produces her work best in this way, (and that she does, every man of attentive observation can see,) we certainly ought to follow her example; then let us plow, and hoe, and dig, but ever bear in mind that our business is to aid nature in her products, and that too much plowing, digging and hoeing about plants is injurious, by preventing nature from performing her work, or by undoing what she has already made an effort to do, and is in the continuance of doing.

With much respect, LYTTLETON PHYSICK.

Aararat Farm, Md., Nov. 13, 1843.

WORM IN ONIONS.

E. G. JOHNSON, Esq. of Derby, Vt., informs us that for three years past, the onion crops in that vicinity have been almost entirely destroyed by a small white worm. After describing their ravages, he says, "I have tried many experiments with little success as preventives. Sulphur, saltpetre, salt, vinegar, strong lye, ashes, tobacco juice, whiskey, spirits of turpentine have been tried, and the same worm lived through them all. At last I tried soot from the stove pipe, and it would seem to benumb the maggot, so that he was apparently dead, but he would revive on being washed. However, I took the hint from it, and this season, as soon as the worm made his appearance, I removed the soil from the bottoms, close to the root, and applied soot and powdered charcoal, which arrested the progress of the maggot for the time, but after the application had lost its power, and the onions were full grown, they were again attacked, and I was forced to pull them to save them.

"Now has any other part of the United States been similarly affected? and if so, has any remedy been found? What is the name of the insect? Where and in what manner is he produced? and how does he get into the onion? These are inquiries, gentlemen, I should be most happy to have you answer. The maggot is a small white one, about the size of a cheese maggot, or rather larger, and sometimes hundreds will be found in one onion. At first, they were confined to a small portion of this county, but have spread rapidly, until this year I know of no onions grown except my own."

Onions have been attacked by the worm in other parts of the country, but rarely to the extent noticed by our correspondent, and crops are sometimes lost which are attributed to other causes, when doubtless the true one is the worm. Kollar, in his valuable work on Insects, says the onion worm "is the larvæ or maggot of a small fly, the *Anthomyia ceparum,* which is only half the size of the house fly. The perfect insect or fly is entirely of an ash-grey color in the female, or with black stripes on the back of the male, the wings clear like glass, with broad iridescent reflections and yellowish brown veins." There are figures of the maggot, as it appears in the onion, and of the fly and the pupa, in the work referred to. There are several generations of them in the course of the season, which accounts for the second attack on the onions of Mr. Johnson. The description and statements of Dr. Harris agree perfectly with those of Kollar. The latter says the fly lays its eggs on the leaf of the onion, close to the ground. When hatched, it bores through the leaf and descends into the onion to its base, which, if numerous enough, it wholly destroys. Their destruction is found difficult. "Strewing the beds with powdered charcoal has been found the most useful, but it must not be applied to every part of the bed, as it is best to sacrifice a portion of the crop rather than lose the whole, by leaving patches free from charcoal, where the parent fly will deposit her eggs, and which, when the larvæ are hatched, can be removed and burned." The white onion is much more liable to be attacked and destroyed than the other varieties. After the onion is attacked, which is known by the outward leaves turning prematurely yellow, it should be removed and destroyed at once, as a new generation is thus cut off. We have never known a bed of onions sown on what is called the hearth of a coal pit, or where blacksmith's coal has been burned, injured by the fly; and it seems probable the effect of powdered charcoal may be good. Burning all diseased onions before the larvæ leaves them, is probably, however, the best preventive, and if generally adopted, would soon end their ravages.

TO PROTECT FRUIT TREES FROM MICE.

Editors of the Cultivator—I observed an article in your paper sometime since, from a writer who inquired how he was to preserve young fruit trees from the attacks of mice in the winter, as they gnaw the bark beneath the snow or crust, and thus destroy the tree. I have also heard this complaint from western farmers, particularly from Wiskonsan, where many young orchards have suffered severely from the winter depredations of these vermin.

Now it is said that castor oil beans planted in a garden will prevent the attacks of mice, and also drive off moles from the vicinity where the beans are planted. If so, would not a composition made of these beans, and spread on cloth to bind around the trunk, be a preventive against the evil complained of? Would the beans in this way not be as offensive as when planted? Would the application of the oil (castor oil,) to the bark, not prevent the attacks?

An answer to these questions, or any other suggestions, would oblige one interested.

New-York, Nov. 20, 1843. Hazelwood.

Domestic Economy.

HINTS TO FARMERS' WIVES.

Messrs. Editors—I noticed in your paper, a few months since, some hints to farmers' wives, with regard to the proper management of kitchen affairs; also an insinuation that they had been rather overlooked, while the press had been teeming with instruction to the farmer. The wish was expressed that some counsel might be directed to the wife, that would enable her the better to perform her varied and ceaseless routine of household duties.

The first twenty years of my life were spent in the country on the farm; consequently, all the duties connected with that pleasant and independent manner of living are old acquaintances; and while memory has been recalling the past, with all the freshness of present reality, I have often been led to contrast the different methods of performing the labor in families, and to mark the relative advantages and disadvantages of each. In some I have noticed a constant hurry and bustle, rising up early and sitting up late. These are always indications of a press of business; and a long, heavy day's work, or a week or even a month's hard labor does not relieve that pressure. Instead of getting forward with business, it rather accumulates; very many things that appear trifling at the time, must be omitted till some indefinite future, and the probability is that neglect will follow procrastination, interest will subside as other cares arise from day to day, so that what is omitted at the proper time is almost necessarily never done at all, for want of time. The good woman wonders how a neighbor of hers accomplishes such an amount of labor, and readily concludes she must have an iron constitution or she never could do it. But she does not realize that she labors much harder and takes many more steps than her neighbor, just for the want of system and tact, as it is termed. In preparing a breakfast or a dinner, there is only one article in the mind at the same time, and she will enter her pantry or cellar three times, when, if she had formed some plan and cast her eyes about her for a moment, once going would answer every purpose. A little forethought and calculation would enable her to direct every step to the accomplishment of more than a single item of her little affairs, for household duties are all in themselves considered little things; but as one says, "to be faithful in little things is something great." And in this very sentiment lies the secret of woman's dignity. Her whole life is a routine of *little* duties and avocations that can be performed by no other hand, and yet the happiness of families, the habits of the rising generation, and I had almost said, the fate of a nation, is depending upon just such little things, for they all have an abiding influence in the formation of character, and she who is faithful is indeed an ornament to her sex.

But let us for a few moments look at another class of housekeepers, whose labor is timely and well directed, who make it their business to accomplish the most that can possibly be done in a given length of time. Their thoughts are sufficiently engrossed with their business to insure success; their plan has been deliberately formed and matured by careful observation, and making such changes as will be most likely to meet the wants and finish the work of each day; for with them every day has its appropriate work, and the business of one day does not ordinarily interfere with that of another. You may begin the day, if you please, with one of these housewives. Take one of her busiest in midsummer, and follow her from the first dawn of the morning; she has no confusion, no chairs to shove aside as she passes along to her kitchen, no misplaced articles to look for; every thing is ready for present use. "A place for every thing and every thing in its place," is her motto, and it is resolutely brought to bear upon every member of the family. From the opening of the fire in the morning, you will notice her economy. As soon as the first materials are set in motion for her breakfast, she enters her dairy and prepares her milk to occupy the first vacancy over the fire, so that there shall be no loss of heat or time, for her cheese can be forming while she is eating. Thus she lays the foundation for the whole day's work before breakfast; and if, as is often the case, she has a few waiting minutes, she arranges her bed room or some other necessary item, for her minutes are very precious in the cool of the day, simply because she can work so much faster and with more comfort. Breakfast is over, not in a hurried, confused kind of jangling way, but in that quiet, comfortable manner that would make even a stranger feel comparatively at home, and always indicative of contentment with one's situation. Then comes the dish washing, sweeping, preparing the cheese for the press, &c., and you will be surprised and highly gratified to see them all under way at nearly the same time, and with what rapidity all are accomplished; even the vegetables prepared for dinner by the time the clock strikes nine, and she is in readiness for the wheel or the washtub, as the case may be. The cooking of the dinner does not seem to hinder her materially; it is done at odd times or minutes which in other families are entirely lost, but it is well done, for the same well directed skill and judgment measures the quantities and regulates the requisite amount of heat to make it palatable. The same fire that finishes the cooking, heats the water for washing dishes, and the same care and despatch is observable through the dinner hour and two or three successive hours that are devoted to active labor. You will then see the good housewife with her sewing or knitting, perhaps spending an hour with some friend, enjoying a respite from care, or sympathising with some afflicted one. All have a tendency to nerve her to the performance of further duties.

Now there is no mystery in all this: system and order have been her watchwords, and she has made it her business to strike out every thing that would not have a tendency to promote regularity, and in doing it has saved herself two-thirds of the perplexities of which so large a portion of females complain. Martha.

LIME FOR PRESERVING APPLES.

Some person has made an excellent application of the discovery which was made some years since, of the value of lime in preserving articles liable to damage from moisture. One of its first applications was in preserving plants sent from distant parts of the world, by scientific explorers, to France and England. These specimens, heretofore, in spite of the greatest sklil and care, were apt in long voyages to become moldy and discolored, but it was found when packed in tight cases with powdered quicklime, this substance absorbed all moisture, and kept the plants perfectly dry and safe. Now it has been applied to the preservation of apples. The process we condense from the Genesee Farmer:—"The apples are to be kept in casks, and in putting them up, a layer of chaff is placed on the bottom, sprinkled with quicklime; then a layer of apples, to be followed by successive layers of chaff and lime, until the cask is filled, when it is to be closely headed up."

Chaff has, it is well known, been frequently used for packing apples, but by itself it is not a sufficient guard against loss, and has been generally discarded, as it was found to imbibe and retain moisture, causing the apples to mold and rot worse than they would if packed alone. One or two quarts of caustic lime is found to effectually counteract this tendency to absorb moisture; the little which enters the cask being attracted by the lime rather than the chaff. We have had no experience in this method of preserving apples, but the theory is a good one, and we doubt not would be successful. It is besides so very easy in application that we think many would do well to test its efficiency the present season.

To kill flies in a cheese room and elsewhere.—Cheese rooms are frequently kept closed and darkened, to keep out the flies, as the dairymaids say. Mr. Livesay asserts that this practice, ruinous to cheese, may be avoided by occasionally boiling a pennyworth of quassia chips in a pint of water, sweetening it, and placing it on plates, where the flies have access to it. It will destroy all that taste it.

Cheese.—Mr. Livesay, in the Preston Chronicle, has the following remarks on cheese, which we think worthy the notice of dairymen, as we have seen some dairies in this country suffering from the evils he condemns:—"Cheese being animal matter, cannot have too much air. I have noticed for some time that those dairies which have been kept in a large well aired room, have been quite sound; and those kept in a close ill ventilated room, were either faded, or very bad in the flavor. Though cheese should not be kept in too high a temperature, yet they will bear the summer heat very well, provided they have a constant supply of good air."

CATTLE SHOWS.

The American Institute.—Below we give a list of the Premiums on Stock, awarded at the late exhibition of the Institute:

Horses.—*Stallions.*—Hezekiah Wetmore, Westchester co., N. Y., best stallion—silver cup. Henry Vanderwater, New-York, for 2d do.—diploma.

Brood Mares.—Robert L. Stevens, Hoboken, N. J., best brood mare, Polly Hopkins—silver cup. John H. Coster, New-York, brood mare, Gulnare—silver medal. Henry Watson, East Windsor, Ct., brood mare, Betsy Wilson—diploma: a silver cup having been before awarded. John A. Pool, New-Brunswick, N. J., brood mare Indiana—diploma: a silver cup having been before awarded. C. M. Hall, Harlem, N. Y., young brood mare, Young Lady Light-Foot—diploma. Alexander Benedict, Staten Island, N. Y., grey mare—diploma.

Colts.—Robert L. Stevens, Hoboken, N. J., best colt—silver cup.

Jacks.—John A. Pool, New-Brunswick, N. J., best jack—diploma: a silver cup awarded last year.

Mules.—Robert L. Stevens, Hoboken, N. J., best pair of mules—silver cup.

Improved Breeds of Cattle.—*Bulls, 2 years old and upwards.*—George Vail, Troy, N. Y., best Durham bull, Meteor—silver cup. Henry Hull, best Devon bull—silver cup.

Bulls, 1 year old.—George M. Woolsey, Hurlgate Neck, N. Y., best Durham bull, Jupiter—silver cup.

Bull Calves.—Wm. Gibbons, Madison, N. J., best Durham bull calf—silver medal.

Cows.—Thomas Addis Emmet, Mt. Vernon, N. Y., best Durham cow, Celeste—silver cup.

Heifers.—Wm. Pirnie, Harrisontown, N. Y., best Durham heifer, Victoria—silver cup.

Heifer Calves.—Wm. Gibbons, Madison, N. J., best Durham heifer calf—silver medal.

Native Stock.—*Cows.*—John R. Peters, New-York, best native cow—silver cup.

Heifers.—Joseph Clowes, Harsimus, N. J., best native heifer—silver medal.

Bull Calves.—Bethuel Brackett, New-Haven, Ct., best native bull calf—silver medal.

Working Oxen.—Benajah Ives, Cheshire, Ct., best pair of working oxen—silver cup. Lambert Wyckoff, Bushwick, L. I., 2d best pair of working oxen—silver medal.

Special Awards.—*Bulls.*—Wm. Gibbons, Madison, N. J., Durham bull, Zero—silver cup. John A. Pool, New-Brunswick, N. J., Durham bull, Carter—silver cup.

Cows.—Henry Whitney, New-Haven, Ct., Durham heifer, Cornelia—silver cup. Henry Smith, Astoria, L. I., a cow of great milking qualities—silver cup.

Sheep.—*Long Wools.*—George Monteith, Albany, N. Y., best buck, Costwold breed—silver cup. Charles Blackbourne, Bedford, L. I., best ewe, Lincolnshire breed—silver cup. Charles Blackbourne, Bedford, L. I., best lamb—silver medal.

Middle Wools.—Obadiah Elliot, Middleham, N. J., best buck, Southdown breed—silver cup. Francis M. Rotch, Butternutts, N. Y., best ewe, Southdown breed—silver cup. Francis M. Rotch, Butternutis, N. Y., best lamb, Southdown breed—silver medal.

Fat Wethers.—J. Macdonald McIntyre, Albany, N. Y., best fat wether, Southdown and Cotswold breeds—silver cup.

Special Awards.—Wm. Pirnie, Harrisontown, N.Y., for a ewe and lamb, Leicester breed—diploma.

James Broidie, Westchester co., N. Y., for a ewe and two lambs, Leicester breed—diploma.

J. Macdonald McIntyre, Albany, N. Y., for a Southdown buck—diploma.

John Beatty, Morris co., N. J., for six ewes of the Bakewell breed—diploma.

Charles Blackbourne, Bedford, L. I., for a Lincolnshire buck—diploma.

George Monteith, Albany, N. Y., for Leicester bucks—diploma.

Swine.—William P. Moss, New-York, for the best Berkshire boar—silver cup.

Alexander Benedict, Staten Island, for the 2d best boar—diploma.

John Giles, Providence, R. I., for the best Berkshire sow—silver cup.

John Rutter, Yorkville, N. Y., for the 2d best sow—diploma.

PREMIUM CROPS.

Chemung Co. Ag. Society.—The following premiums on grain crops were awarded at the late Exhibition of this Society, held at Elmira, Oct. 17:

Corn.—J. L. Smith, Southport, best acre corn, one-fourth acre husked, which yielded 52¼ bushels of ears.

This is certified to be an average of a lot containing between 3 and 4 acres, making 209 bushels of ears to an acre, long white 8 rowed variety; soil, gravelly loam; had laid in meadow and pasture 10 or 12 years, and had been foddered on some; had last spring a dressing of 25 loads of long yard manure to acre; planted $3\frac{1}{2}$ by $1\frac{1}{2}$ feet, and thinned to three stalks in hill; hoed twice, and had half a bushel of plaster to the acre.

A. I. Wynkoop, Chemung, second best corn, two acres; first 176, and 2d acre 170 bushels ears to acre.

Certificates accompanying, show that the ground was measured before the corn was cut; that each acre was husked and measured; that the piece contains 5 acres; soil is a coarse, gravelly loam, had laid to clover four or five years, was plowed usual depth, well harrowed, and planted after a corn marker just 3 feet by $1\frac{1}{2}$; seed rolled in plaster, and planted 16th and 17th May, about four grains to hill; had two light dressings, first after cultivator, and second after plow; was plastered twice; corn white, 8 and 12 rowed varieties.

P. C. Ingersoll, Southport, third best corn, a field of about 25 acres, yielding $164\frac{1}{4}$ bushels ears to acre, planted 3 feet 4 inches apart.

Wheat.—E. Canfield, Southport, best acre, and best sample of wheat, 45 bushels and $29\frac{1}{2}$ quarts upon an acre.

Certified by E. Canfield and Richard Warner. Wheat, Hutchinson variety; no statement of soil or manner of cultivation accompanying the vouchers.

George Bennett, Elmira, second best acre of wheat, 35 bushels 5 quarts by measure, weighing $61\frac{1}{2}$ pounds to the bushel, making by weight 36 bushels 1 pound.

Samuel M. Hastings certifies that he helped measure the land and wheat, and knows that two wheat crops, of which the above is the last, was raised in succession; the wheat stubble of last year was plowed twice; wheat sowed on 3d of October; $1\frac{1}{2}$ bushels seed, a half bushel of plaster used to the acre.

Lewis Miller, Southport, third best, 30 bushels to the the acre, or 210 bushels on 7 acres.

Land gravelly loam, plowed once, and sowed on a clover and blue grass sod, on 17th September; seed rolled in lime; sowed with plaster, one bushel to acre, on 15th April, on snow. Wheat white chaff bald.

Thomas Couch presented the fourth best crop of wheat and second best sample red chaff bald, being 18 bushels to the acre on a field of 25 acres, whole field 450 bushels; plowed but once.

Spring Wheat.—To Eli C. Frost, for best Italian spring wheat, $28\frac{1}{2}$ bushels from 184 rods of land, stubble ground, plowed once, and sowed on the 11th May.

Barley.—Joseph Livesay, best barley, $66\frac{3}{4}$ bushels on $1\frac{1}{4}$ acres 7 rods.

P. C. Ingersoll, 2d best, 95 bushels on 2 acres 3 rods.

Buckwheat.—George Bennett, best buckwheat, 45 bushels 3 quarts on $1\frac{3}{4}$ acres.

WASHINGTON COUNTY AG. FAIR.

MESSRS. GAYLORD & TUCKER—The third annual Fair of the Washington County Agricultural Society was held in the village of Argyle on the 10th and 11th of October. Though lowering clouds obscured the sky, and copious rains drenched the earth upon the previous and following days, mild and sunny autumn shone out in all its loveliness upon these holidays of the farmer, as though Providence designed to smile upon an occasion when those many political and sectarian feelings which divide us were to be temporarily forgotten, and our whole population was to meet together and exchange their salutations, and celebrate their "Harvest Home."

This was the first agricultural Fair ever held in this county upon two successive days; and the concourse of citizens and ladies upon each of these days was so large as to convince every one of the judiciousness of the arrangement. In truth, no appointments seem to be so universally popular, and to bring our whole community together, in mass, as do the Fairs of our Agricultural Society. The exhibition, in the number, variety and excellence of its specimens, is generally conceded to have surpassed any of those hitherto held. The beautiful stud horses of Mr. LONG and others, with much of the stock descended from them; the fine Short-Horn cattle of Messrs. HOLMES, SILL, &c., made these branches of the exhibition highly interesting. A South Down buck, owned by L. G. TAYLOR, was the first animal of this breed ever exhibited in this county; and unless a *vast* addition to the hardiness of constitution of our present flocks can be acquired by a South Down cross, so coarse and light is the fleece, we are confident this blood can never become esteemed in this Merino and Saxony stocked district. But it is in field crops that the late Fair told most honorably for our county. Situated as we are, at the western base of the Green mountains; our hills of gentle descent and moderate elevation—rarely so steep as to be inconvenient for cultivation; the underlieing rock (Taconic slate,) every where traversed with layers and beds of sparry limestone, affording in many places the choicest lime, and by its gradual decomposition perpetually fertilizing the overlaying soil, we doubt whether any county of the state has more natural advantages to adapt it for lucrative tillage. When our farms shall have fully recovered from that exhaustion which has resulted from the constant cropping practiced in former years, a surplus much beyond what we now produce will be marketed from this vicinity.

Of the several competitors for our premiums on Indian corn, four had reared over 84 bushels to the acre. The first premium was awarded to H. R. MCLEAN, who exhibited ample proof that his crop amounts to but a fraction under $115\frac{1}{2}$ bushels of the common eight rowed yellow corn. The same gentleman took the first premium on potatoes—529 bushels merinos on an acre.

The first premium on rye was awarded to G. MCGEOCH. A piece of meadow land on which the grass had become light was, after mowing, broken up and sowed with buckwheat. This was turned under when green, and the rye sown. One acre of the piece yielded $39\frac{1}{2}$ bushels, another $37\frac{1}{2}$. This result strongly indicates that with the same favor as to fertility of soil which other crops receive, this grain, so generally scouted and sneered at by our farmers, may be made as productive and profitable as some of its more esteemed competitors. The largest acre of winter wheat was grown by S. MCFARLAND—32 bushels. The highest premium on butter was awarded to WM. BOYD, his 8 common native cows, in 30 days succeeding July 15th, having averaged upwards of $41\frac{1}{2}$ lbs. each.

Highly interesting and instructive addresses were delivered, upon the first day by one of our most intelligent practical farmers, L. B. ARMSTRONG, and upon the second day by J. W. THOMPSON, ESQ. Our officers for the ensuing year are, DAVID SILL, Hartford, President; L. B. ARMSTRONG, Kingsbury, Corresp. Secretary; ASA FITCH, Salem, Record. Secretary; JAMES SAVAGE, Argyle, Treasurer, together with four Vice-Presidents, and an Executive Committee of two from each town of the county. ASA FITCH.

Fitch's Point, Salem, Nov. 27th, 1843.

CITY AGENTS FOR THE CULTIVATOR.

OUR subscribers in the following cities can renew their subscriptions by applying to the annexed agents:

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AGRICULTURAL PAPERS.

THE CULTIVATOR.—A new series of this well known and popular paper will be commenced on the 1st of Jan. 1844. The sheet will be enlarged, and the form changed from a quarto to an octavo—each no. to contain 32 pages, instead of 16, as heretofore. Each succeeding vol. (of which ten have now been completed,) of this work, has been received with increasing favor by the public. In its able correspondence, both at home and abroad—in its illustrations and mechanical execution, and the extent of its circulation, it is without a rival. No efforts will be spared to render the volume for 1844, superior to any that have preceded it. Price, $1.00 a year—Seven copies for $5.00—Fifteen copies for $10.

THE FARMER'S MUSEUM.—The proprietor of the Cultivator will commence the publication of a new agricultural paper with this title, on the 1st of January, 1844. It will be one-half the size of the Cultivator, and be printed and illustrated in the same neat and tasteful manner. Price *Fifty Cents* a year for a single copy—*Fourteen* copies for $5—*Thirty* copies for $10.

☞ Subscriptions for the above papers received by Postmasters throughout the country, and the Friends of Agricultural improvement generally are respectfully requested to act as Agents. Specimen numbers and Subscription papers will be sent to any person disposed to act as Agent.

☞ All orders for the above papers must be accompanied with advance payments, and be addressed to

LUTHER TUCKER, Publisher,
Albany, N. York.

COFFEE AND SPICE FACTORY.

ELIJAH WITHINGTON'S Coffee and Spice Factory, No. 7 Dutch Street, between John and Fulton street, New-York. E. W. manufactures and has constantly on hand and for sale, the following articles, viz:

Green Coffee, Roasted Coffee, Ground Coffee, Domestic Coffee, Prepared Cocoa, Mustard, Whole Nutmegs, Ground Cloves, Ground Cinnamon, Ground Pepper, Ground Alspice, Ground Ginger, Ground Cayenne, Ground Nutmegs.

☞ Coffee roasted and ground for Grocers. Roasting 50 cts. per hundred. Grinding, 50 cts. per hundred.

The above named goods are sold on the most reasonable terms, and delivered to any part of the city or Brooklyn, free of expense.

N. B. Cash paid for Mustard Seed.

Dec. 1. 1843.—3*t.*

TO FARMERS.

THE subscriber is prepared to furnish farmers with Stone and Shell Lime, either slaked or unslaked, at a rate which will make it an object for them to use it liberally in the improvement of their lands, for which purpose he has sold large quantities during the past year. He refers to John Townsend, C. N. Bement, and W. H. Sotham, Esqr's. who have used his lime extensively. E. C. WARNER,

Albany, Dec. 1, 1843.—3t.* *Corner Market and Nucella-sts.*

POUDRETTE

OF the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New-York. ORDERS by mail, with the cash, will be promptly delivered, and with the same care as though the purchaser was present, if addressed as above to D. K. MINOR,

Dec. 1, 1843.—3t. *Agent.*

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late Prince's, Flushing, L. I., near New-York.

THE new Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery, (known as PRINCE'S, and by the above title for nearly fifty years,) with directions for their culture, may be had gratis on application to the New Proprietors by mail, post paid.

The collection at this establishment is unrivalled, and prices generally very much reduced; and the proprietors flatter themselves that the Catalogue will be found to surpass in extent of information and usefulness, any thing of the kind ever before presented to the public; and to be worthy of a permanent place in the library of the Horticulturist. Orders will be promptly executed. WINTER & CO.,

Flushing, Nov. 13, 1843.—2t. *Proprietors.*

WILLIAM HOVEY'S SPIRAL REVOLVING HAY CUTTER.

THESE celebrated machines for cutting all kinds of fodder for cattle and horses, such as hay, straw, corn stalks, &c., are made and sold by the subscriber, at Worcester, Mass. Also sold by Ruggles, Nourse & Mason, at the Boston Agricultural Ware House, and by several of the dealers in the city of New-York.

Retail prices of machine,	with	6 knives on cylinder,	$15
do	do	6 larger balance wheel,	20
do	do	8 do geered,	25
To cut two lengths	do	2 inches long, 16 knives, splendid,	30

These knives are so constructed, that by turning 2 or 3 screws a little, each knife can be taken off from the cylinder separately, and in case of failure, new ones can be put on or ground and replaced without disturbing the other knives; and by means of 2 set screws under the inner edge of each knife, the edges of the knives can be adjusted by those set screws so as to come in equal contact with the hide roller, as they revolve in connection. This arrangement of adjusting the knives on the cylinder, is considered of vast importance to the usefulness of those machines, and belongs exclusively to the subscriber. For further information on the subject, the subscriber would refer to a communication in the December No. of this paper, by Caleb N Bement, Esq. Albany. WILLIAM HOVEY.

Worcester, Nov. 27th, 1843.

SUBSOIL PLOW.

THE prices of the Subsoil Plow described on another page of this paper, are as follows, viz: No. 1, $8—No. 2, $10—No. 3, $12, with extra points. These plows may be obtained at 176 Market st., Philadelphia, of D. O. PROUTY.

Oct. 12.

FARMS FOR SALE.

TWO good Farms for sale, near Hoosic Falls in Rensselaer county. The south farm contains 90 acres, and the north farm contains 87 acres. These farms are productive—first rate arable land, with suitable dwelling, outhouse and orchard to each; they are wooded and watered, &c. This property is so situated as to make one or two farms, and will be sold to suit purchasers.

A productive Farm in the town of Stillwater, county of Saratoga, 6 miles from Ballston Spa, and $17\frac{1}{2}$ miles from Lansingburgh. It is pleasantly situated on the south end of Saratoga Lake, containing 65 acres of land under good improvement, is well wooded and watered, a new commodious dwelling and out buildings, &c.

Also, a Farm containing 80 acres of land, in the town of Malta, county of Saratoga, 5 miles from Ballston Spa, 2 miles east of Dunning st.; dwelling house, large barn, &c.

☞ These Farms will be sold cheap, and the greatest portion of the purchase money can remain in mortgage on the same for years. For further particulars apply at Lansingburgh, N. Y., to ALEXANDER WALSH.

Nov. 1, 1843.—2t.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

WARREN'S NEWLY INVENTED HORSE POWER AND THRESHING MACHINE.

THE prices of these highly valuable machines, are as follows, viz:

For a Two Horse Power and Threshing Machine, together,	$75
" One " " " " "	60
" Two Horse Power Machine, alone,	50
" One " " " "	40

Payment to be made in this city, on delivery of Machines. Bands not furnished except by particular order—price $4 each. Orders, post paid, executed promptly.

L. Bostwick,
J. Plant,
W. T. Cole.

L. BOSTWICK & CO.
58 Water st.

New-York June 17, 1843—jytf.

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